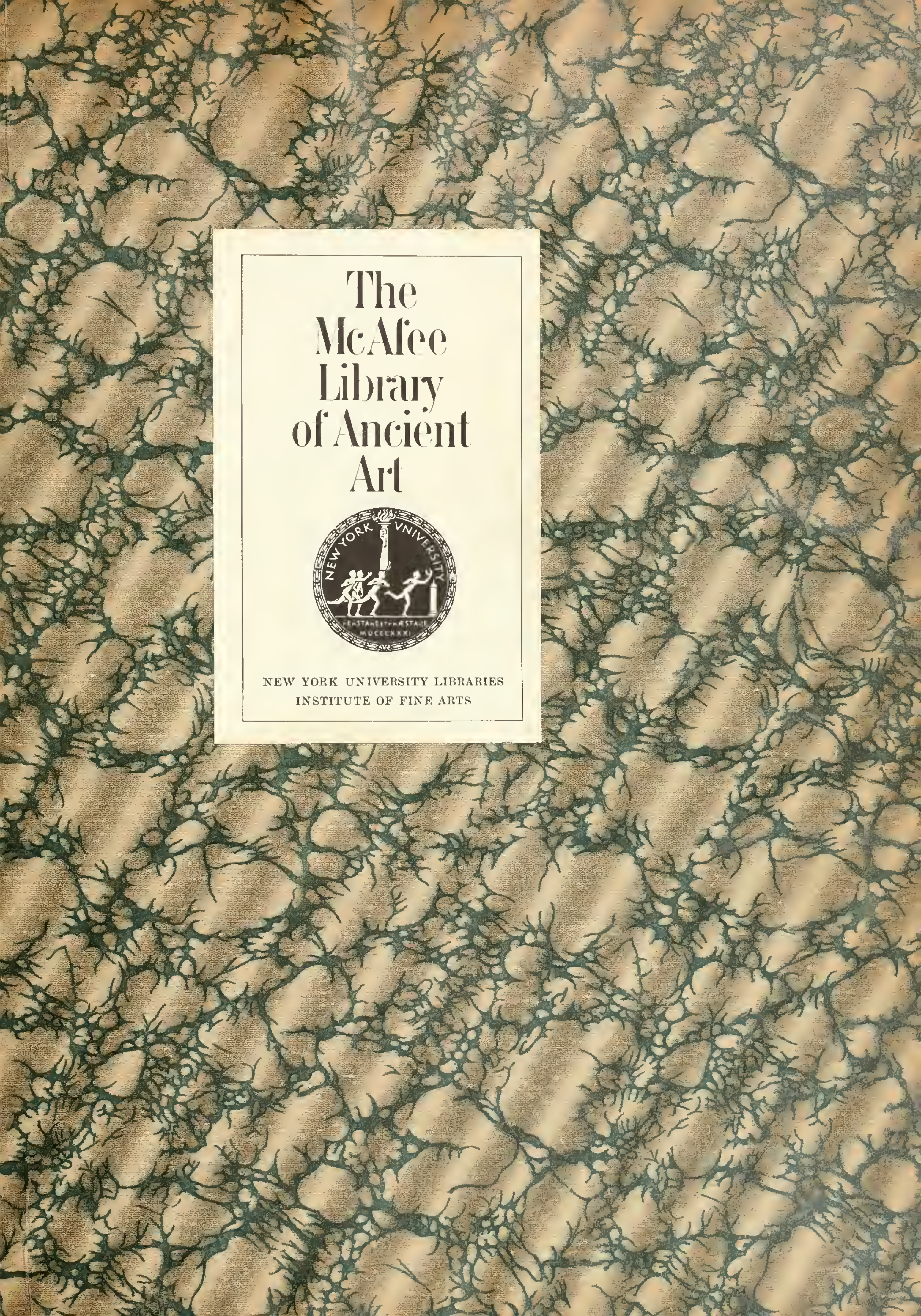




TIAI


LES LIVRES ONT BEAUCOUP
DE QUALITEZ AGREABLES
A CEULX QUI LES SCAVENT
CHOISIR
Montaigne
PAUL LAGRAVE


The McAfee Library of Ancient Art
NEW YORK UNIVERSITY
NEW YORK UNIVERSITY LIBRARIES
INSTITUTE OF FINE ARTS



BRITISH SCHOOL OF ARCHAEOLOGY IN EGYPT
AND EGYPTIAN RESEARCH ACCOUNT
SEVENTEENTH YEAR, 1911

---

# ROMAN PORTRAITS
# AND
# MEMPHIS (IV)

BY

W. M. FLINDERS PETRIE
HON. D.C.L., LL.D., LITT.D., PH.D.
F.R.S., F.B.A., HON. F.S.A. (SCOT.), A.R.I.B.A.
MEMBER OF THE ROYAL IRISH ACADEMY
MEMBER OF THE IMPERIAL GERMAN ARCHAEOLOGICAL INSTITUTE
CORRESPONDING MEMBER OF THE SOCIETY OF ANTHROPOLOGY, BERLIN
MEMBER OF THE ITALIAN SOCIETY OF ANTHROPOLOGY
MEMBER OF THE ROMAN SOCIETY OF ANTHROPOLOGY
MEMBER OF THE SOCIETY OF NORTHERN ANTIQUARIES
MEMBER OF THE AMERICAN PHILOSOPHICAL SOCIETY
EDWARDS PROFESSOR OF EGYPTOLOGY, UNIVERSITY OF LONDON

---

LONDON
SCHOOL OF ARCHAEOLOGY IN EGYPT
UNIVERSITY COLLEGE, GOWER STREET, W.C.
AND
BERNARD QUARITCH
11, GRAFTON STREET, NEW BOND STREET, W.
1911

# CONTENTS

## INTRODUCTION



## CHAPTER I

### THE BURIALS



## CHAPTER II

### THE PORTRAITS



## CHAPTER III

### METHODS OF PAINTING



## CHAPTER IV

### THE PERIOD AND PEOPLE



## CHAPTER V

### THE WRAPPING OF MUMMIES

# LIST OF PLATES

WITH PAGE REFERENCES TO THE DESCRIPTIONS

## HAWARA



## MEMPHIS

*To appear early in* 1912

# THE HAWARA PORTFOLIO:

## PAINTINGS OF THE ROMAN AGE

FOUND BY

W. M. FLINDERS PETRIE, F.R.S., F.B.A.

1888, 1911

TWENTY-FOUR COLOURED PLATES

Reproduced by the Photochrom Co.
And uniform with the four coloured plates in this volume

*Issued at* 50*s*.
*To subscribers of the British School*, 42*s*.

# ROMAN PORTRAITS AND MEMPHIS IV

## INTRODUCTION

1. THE work of the past season, 1910–11, lay in four different sites, all within about ten to fifty miles south of Cairo. Opposite to the village of Mazghuneh Mr. Mackay found two pyramids, hitherto unpublished. At Gerzeh, north of Meydum, Mr. Wainwright found and cleared a prehistoric cemetery. At Hawara I succeeded in finding sculptures of the Labyrinth, and opened many tombs of the xiith dynasty. All of these results will appear in the second volume of this year. Here we are concerned with my work on the Roman cemetery of Hawara, or Howareh as it should be more correctly called from the wide-spread Arab tribe. The excavations which I made there in 1888 were this year renewed and completed. The natives in their ceaseless search for nitrous earth—or *sebakh*—had removed much of the soil which formerly covered the cemetery; and so the graves that remained were far more accessible. As portraits were being found here by casual digging, Sir Gaston Maspero desired me to clear the site. This work was done entirely by well-trained men from Quft, who camped on the spot. The new difficulty in Egypt now is that the boys do not care to be troubled to work; in the Fayum they appear to be their own masters, and it is not until they have to shift for themselves that they find the need of hard work. Actually the men had to do much of their own basket-work, carrying the stuff out after cutting it, which was a great waste of trained labour, and hindered our progress. Our other work described in this volume was at Memphis, where sculptures were again found; fortunately boys are eager and work well there.

2. This season I had the advantage, during most of the time, of the companionship of Mr. James Stopford, who assisted with his engineering experience in the work and specially in the packing. Also Mr. Angelo Hayter gave much useful work in the drawings, while I was fully occupied with the direction of men, accounts, photographing, and cleaning the portraits.

The discoveries of this year have led to a fresh arrangement of publication. When I worked at Hawara twenty-three years ago, it was only possible with difficulty to get some collotype reproductions issued. Now colour-work has advanced so much, that the portraits can be efficiently published. Accordingly this volume contains four coloured plates besides photographs of thirty-two other portraits. To issue the whole of the colour plates in the usual volumes would be impracticable, as these already here cost nearly as much as an ordinary volume. The bulk of them are therefore issued separately in a Portfolio, and those who wish for the whole text and reproductions of the portraits will find them in this volume and the Portfolio taken together. This forms the only issue of facsimiles of classical portraiture on an extensive scale; it is much to be hoped that the other examples preserved in museums will be published similarly both in method and cost, so as to be available for study and comparison.

## CHAPTER I

### THE BURIALS

3. THE portraits discovered upon the mummies at Hawara this year are in direct continuation with those which I unearthed in that cemetery in 1888. A few have been found there in the interval between the first and second part of my work: but even in that cemetery the portraits are so rare that they do not reward work on a small scale. Our work was restricted to regions where portraits might probably be found, but on the average each digger only obtained one in six weeks, excluding those examples whose condition made them worthless. Out of about a hundred mummies of the same age, found buried in the same way, there is only one portrait preserved, and perhaps one more decayed or destroyed portrait.

For purposes of reference it is needful to keep to

the original register marks in the order of discovery, as too much confusion would be caused by a complete re-numbering. The marks on those of 1888 follow the alphabet A–Z, then AA–ZZ, and AB–AZ, BA–BG, 81 in all. The marks of 1911 follow numbers from 1 to 65. Of the 1888 portraits 33 were published in photograph; in *Hawara* there are 27 that were distributed, of which Nos. 1, 2, 3, 7, 9, 10, 12 in Frontispiece and pl. x are in the National Gallery, where also are 4 others not published then; in *Kahun* are 6 of those that were kept at the Cairo Museum. Of these portraits 10 are published in colour this year, and 9 republished in photograph. As the *Hawara* volume has been long out of print and rare, I regret that the scattering of that collection makes it impossible now to trace them all, or to collect a complete republication. Most of the best of them, however, will be found in our issues of this year.

Of the 1911 portraits, 4 are given in colour here, pls. i–iv; 23 are given here, with one of 1888, in photograph, pls. v–vii *a*; and 14 are in colour, together with 10 of 1888, in the separate Portfolio, see page viii. Thus 41 of this year's are published, leaving 24 unpublished, which are in various stages of decay; many of these were so completely rotten that nothing could even be moved from the ground, but only a note made of the direction, sex, and method of wrapping, where such details were still visible. The totals now published are therefore

| | | | | | |
|---|---|---|---|---|---|
| Of 1888 . . | 10 coloured | 9 plain | = | 19 |
| Of 1911 . . | 18 „ | 23 „ | = | 41 |
| | — | — | | — |
| Totals . | 28 „ | 32 „ | | 60 |

a total of 60 in this volume and the Portfolio. In references the plate number will be given after each portrait number, so as to enable it to be readily found, and P will be put after each number in the Portfolio. For the table of register marks, plate numbers, and museums, see pl. xxvi. For the general appearance of the mummies with gilt heads see pls. x, xii, xiii, xiv; for the portrait mummies see pl. xi.

4. The mode of burial of these portrait mummies differs from that of earlier times. In place of being buried singly, and in chambers, these portraits were usually buried in groups and always in open graves filled with earth. In place of having a chapel, monument, or tablet over them, they were in every case, but one, buried in plain ground without even a brick top over the grave. Several large groups of brick graves in tomb enclosures were uncovered, as shown in pls. xvii, xviii, xxii, but not a single portrait was ever found with such burials. Only in one case was there a stone chamber, surrounding a pit which contained portraits. These were Nos. 2, 3, 4, with one gilt and one plain mummy, five in all, packed in a pit 79 × 55 inches, as shown in pl. xxiii. The chamber round the pit was 117 × 87 out, 89 × 62 inside; only one course of stone remained, and the upper part of the enclosure may have been of brick. In all of the other burials of portraits, about fifty, there was no monument or mark visible above them, and they could only be found by searching the whole ground.

5. The explanation of the richest mummies being thus buried without mark, is seen in the condition of them. Many of them had been much injured by exposure during a long period before burial. The gilt-bust mummies had often been knocked about, the stucco chipped off, sometimes the nose bashed in by a fall, the gilding dirtied, fly-marked, caked with dust which was bound on by rain. The portraits show the same exposure. The paint has flaked off in many cases, as 9, v *a*; 42, vi; 27, vii; and also many which are in too bad a state to reproduce. Others were caked with dirt, and required long cleaning to remove it; on 25, vi some fluid had run down which preserved the paint from change, and has kept it permanently lighter, even after cleaning. The state of the foot-cases shows the same exposure. Most of them were broken in by blows as in xi, 3, sometimes almost destroyed, often dirty. On the feet of one mummy the wrapping had been used by children, who scribbled caricatures upon it, pl. xiii. 1. Others have had the portrait chopped or broken in, as 54 P, 53, v, 34, v.

Thus every sign shows that the mummies, both with and without portraits, had stood exposed for a long time before burial. The conclusion we may draw is that they were kept around the *atrium* of the house, where children were taught their writing lessons, where the dust settled and occasional rain beat in upon the figures, and where in the cleaning of the house the footcases were gradually knocked to pieces.

This explains the contradiction that the mummies prepared with the greatest cost were buried in the roughest manner. They were kept in the house so long as there was any interest felt in them, perhaps for a generation or two. Then, when the persons had passed out of memory, and when the mummies had become soiled and broken, they were sent off to

the cemetery, often as many as half a dozen at once. A plain pit was dug, as small as might possibly hold them; they were shoved in roughly, often two head to foot, another jammed in hard at the side, and a second layer like this repeated, in one case head up and feet up in an old tomb well. No one cared for them by that time, and there was no interest in placing a stele or even a grave mound over them. The brick graves and cenotaphs were only put over those plain mummies which were buried at once, while the survivors still had an interest in them.

These customs explain the old story about drawing a mummy round the hall at a feast. Such a practice would not agree with what we know of earlier customs; but were the mummies kept in the house, it would be quite likely that they would be brought forward to appear in the great religious feasts, and have offerings placed before them, instead of the descendants going out to the cemetery to make offerings on such occasions at the tombs.

6. The different types of mummies in the Greek and Roman period evidently succeeded in the following order of introduction, as I pointed out in *Hawara*, though each type probably continued in use over some later stages.

1. Thin head and foot-cases of papyrus or cloth, covered with dark blue over the wig, revived in Ptolemaic times from a xiith dynasty type.
2. Stout cases of cartonnage covered with painted figures, as in pl. x, 4, 5.
3. Stout cases of cartonnage with thick plaster masks and modelling.
4. Such cases enlarged with broad chests, arms, and drapery, as pl. x, 1.
5. Such bust pieces with a red wreath in the hands, x, 2.
6. Thinner and poorer imitations, as pl. xii.
7. Canvas painting of a face inserted in a stucco bust piece.
8. Canvas painting of whole bust, with red wreath in hand, as YY in Portfolio.
9. Canvas portraits without arms, as 12, 13 in Portfolio.
10. Portraits on wooden panels, as most of those here.

The linking of these various types together precludes our taking them in a different order of derivation, and the general indications of period agree with this.

7. Thus recognising the various types, we may proceed to note the grouping of these in the burial pits, remembering that there is no evidence that these mummies buried thus together were prepared at the same time. On the contrary, where half a dozen mummies of adults were buried together it is probable that at least two generations are represented, perhaps three. Hence these groups contain examples prepared fifty years or more apart. There were not in Egypt, as in England now, many persons without children; hence the mummies were probably nearly all in direct ancestry of the householder.

We will first note the earlier burial groups without portraits. A large square building of brickwork was divided into four compartments by cross-walls, see plan, pl. xxiii, 7. The whole building has been cased with limestone slabs, since removed by Roman lime-burners, and the corners of it were formed by blocks of masonry still in position. Each compartment was filled up with brick filling, evenly laid in loose courses, and undisturbed in the lower parts when we opened it. In the south-east corner were three mummies, all with heads to south; the eastern, A, a woman with gilt face, then a child, C, and another adult, B, in plain wrappings. Beneath these were D, gilt face, head N, under A; E, similar under C; F, plain mummy, head N, under B. Beneath those were G, infant, head N, under D; H, head south under F, both plain. In the south-west corner were three mummies, J, K, L, plain with bandaging and wreaths. In the north-east were twelve plain burials, of which four lay partly under the walls, and were therefore earlier than the building. In the north-west corner was a much earlier cartonnage burial of about the xxiiird dynasty, with the legs only of another body over it. Being beneath undisturbed filling, this broken burial must be older than the building. It is strange that some pieces of bright glazed bowls, of yellow black and green run roughly together, were also beneath the brick filling and must therefore be Roman, though hitherto they would have been considered Arabic.

Another large group is shown pl. xxiii, 6. These all lay in a chamber on the surface of the ground and had not been intentionally buried, but only placed in the chamber, which had a parabolic roof fallen in. A and B had plainly-wrapped heads with six layers of rhombic bandage with gilt buttons (as x, 3; xi, 3) over the bodies. These were placed in what had been the passage leading to the chamber. C had a painted foot-case, but the body was irregularly tied round and the head plainly wrapped. D was a unique example, unfortunately too rotten to

remove whole; the footcase is shown in pl. xi, 7, evidently a cast from the feet of a living girl, coloured pinkish yellow with black sandal straps. Large gilt twisted anklets with lions' heads are on the ankles; and the rhombic bandaging of four layers had very large gilt buttons in the hollows, with others across the chest, and ten rows on the ankles as seen in the photograph. (Univ. Coll. Lond.) The head cartonnage was knocked to pieces and decayed. E had a gilt head-piece but no foot-case; rhombic bandage of four layers, but no buttons. The layer of bandage under the top was green. F was a unique burial with cartonnage head-piece unusually large, having a wreath of loose leaves of gilt canvas and green berries between them, in the hands a red wreath and a candle. The rhombic bandage was in five layers with gilt buttons, and two rows of buttons on the chest. The foot-case was gilt. (Cambridge.) G had a usual gilt head-piece with scenes of the gods on it, and a rhombic bandage.

Another group was of three wedge-faced mummies, type xiii, 4, bandaged to a sharp straight edge down the face; heads, two to south, one north. Beneath these were two others, heads north, and a gilt bust mummy holding a candle, with rhombic bandages five layers deep, buttons, and a gilt foot-case with four captives on soles. All the lower with heads to north.

In another pit similarly there were two gilt-faced mummies, of fine work, one having a painted cloth with figures over the body. With these were two wedge-faced mummies with rhombic bandages in six layers.

8. We turn now to the group of mummies found with the portraits. xxiii, 2; Nos. 2, 3, 4 were with one fine gilt mummy, head N., and one plain, head S. xxiii, 3; Nos. 5, 6, were with three gilt heads all N., and two wedge-faces N. and S. xxiii, 5; Nos. 14 to 17 (all decayed) were with a gilt face, head W., and a wedge-face, W. No. 24 was with a gilt face, head W. No. 36 was with a gilt face. No. 46 was with two gilt faces, heads N. and S.

xxiii, 4; wedge-faces were found with Nos. 7, 8, 9, a wedge-face, head S., and a plain wrapped mummy head S. No. 10 had two wedge-faces. Nos. 12, 13 were with four wedge-faces, all heads to W. No. 27 had a wedge-face, head E. No. 28 was with one, head W. Nos. 49, 50 were with a wedge-face, head E.

In a few cases only plainly-wrapped mummies were with the portraits. No. 1 had immediately over it a plainly-wrapped body of a woman, head to E., of which not a single joint remained articulated, and most of the bones were out of place; this must have been wrapped up as bare bones, even the pelvis and vertebrae being all dissevered. There were three inches of sand between the bodies, which shows that they were buried separately. No. 30 had a plain mummy with it, head S.; No. 38 likewise; and No. 52 had a plain mummy with head W.

These associated plain mummies had their heads to

N., 6; E., 3; S., 6; W., 4

while the portrait mummies with them lay

N., 6; E., 3; S., 10; W., 10

The conclusion seems to be that the men who buried them thought more of laying the portrait mummies to S. or W. than the plain mummies, which might lie any way.

9. We now come to the general question of the direction of burial of the portrait mummies. On first examining the matter, there seemed to be an improbable result that men and women were buried usually in different directions. On further taking the style of the portraits into account, the explanation of this appeared to be due to a difference in period. As it is generally agreed that these portraits belong to the Roman age, and that that was a time of continuous decline in art, it follows that—apart from individual variations—the finer portraits will be earlier than the poorer. No doubt different artists varied greatly, and there might be some poor ones early and superior ones later, just as there was a fine engraver at the Alexandria mint even in the reign of Gallienus; but, on the average of all, the better portraits were the earlier. I therefore classed the portraits as good (22), medium (11), and poor (12). On dividing these according to the direction of the head there was no great difference of good or poor except in the south.

| | Men. | | | | Women. | | | |
|---|---|---|---|---|---|---|---|---|
| | N. | E. | S. | W. | N. | E. | S. | W. |
| Good | 3 | — | 4 | 6 | 2 | 2 | 4 | 1 |
| Medium | — | — | 2 | 1 | 1 | 2 | 5 | — |
| Poor | 2 | 1 | — | 5 | 2 | 1 | — | 1 |

The result is much the same with men and women, and in all directions except south. Putting then the other three directions together, we find

| | Head to south. | Otherwise. |
|---|---|---|
| Good | 8 | 15 |
| Medium | 7 | 4 |
| Poor | — | 12 |

Here it is clear that all the portraits with head to south are good or medium, and not a single poor portrait lay in that direction; whereas in other directions there were nearly as many poor as good. We must then conclude that *all southerly burials are in the earlier part* of the period of portraits.

The direction of the burials and the sex could be distinguished when the portraits were often too much injured to consider their quality. Hence the amount of material is larger on these two points than when including the portraits. We find the direction of the heads to be

| | N. | E. | S. | W. |
|---|---|---|---|---|
| Men | 7 | 1 | 6 | 14 |
| Women | 6 | 5 | 11 | 3 |

This shows a large preponderance of women to the south, nearly a half, and similarly half of the men to the west. We can hardly suppose that the sex was considered at these rough burials. The conclusion must be that, as the southerly burials are the earlier, *women were more often painted in the earlier part of the period* when southern burial was the rule, and men mostly in the later period when western and other positions were common.

10. Another comparison is in the quality of the portraits found singly and those found in groups.

| | Good. | Medium. | Poor. |
|---|---|---|---|
| Portraits singly | 10 | 6 | 8 |
| Portraits in groups | 17 | 7 | 6 |

Here the group portraits are much better in quality. This is due probably to two causes; the groups are likely to belong to richer families who could afford many portraits, and such riches were diminishing during the period through the impoverishment of the country, and so groups would be mainly earlier; also the richer families could afford better artists for their portraits.

Looking now at the relation of the portrait to the preparation of the mummy, we see that the foot-case is related to the quality of the portrait.

| | Good. | Medium. | Bad. |
|---|---|---|---|
| Plain feet | 19 | 9 | 4 |
| Gilt feet | 4 | 2 | 6 |

Here the mummies with plain feet have far better portraits than those with gilt feet.

The same is seen regarding the use of gilt buttons on the bandaging.

| | Good. | Medium. | Bad. |
|---|---|---|---|
| Without buttons | 13 | 7 | 4 |
| With buttons | 12 | 2 | 5 |

Here those with buttons seem rather worse.

11. Let us now compare the southern burials, which we have seen to be all early, with the use of buttons:

| | Heads S. | Otherwise. |
|---|---|---|
| Without buttons | 13 | 15 |
| With buttons | 4 | 16 |

Here the earlier class with heads south seldom have buttons; those in other directions have buttons oftener than not. Hence the *earlier mummies have plain feet and no buttons*; the introduction of gilt footcases and buttons were later additions to the portrait system.

The number of layers of the rhombic wrappings shows a slight decrease; those with good and medium portraits average 6·2 layers, with poor portraits 5·3 layers.

As we have seen that women were more often painted in the earlier and men in the later period, we can check this against the conclusions about the fittings of the mummy.

| | Women. | | Men. | |
|---|---|---|---|---|
| | + | − | + | − |
| Foot-case gilt | 6 | 24 | 9 | 15 |
| Buttons gilt | 10 | 20 | 10 | 13 |

These results agree that the earlier stage was mainly of women's portraits, with few foot-cases and not usually with buttons: while men's portraits have foot-cases and buttons more often.

The red-painted cloth covers, without rhombic bandaging, are all with portraits of good quality, two found in 1888 and two in 1911. Also two resined cloth covers Nos. 59 and 60 both have good portraits, and demotic inscriptions. Hence the whole of the cloth covers seem to belong to the earliest stage of the portraits.

The general conclusions are that the earlier stage of portrait mummies is that of the covers of red cloth, or resined cloth, or else rhombic bandaging: that women were more often painted in the earlier than the later stage: that the burial with head to the south was usual in early times but not later: that in later times gilt foot-cases and buttons were introduced on the portrait mummies from the Egyptian system already existing. The historical conclusion is that the Graeco-Roman population adopted mummification, with the portrait attached, and gradually added the ordinary Egyptian foot-cases and button ornaments at a later time.

## CHAPTER II

### THE PORTRAITS.

12. These portraits are mostly painted with coloured wax, laid on as a solid body of the same tint, and not washed over with additions of different colour. The details and method of painting will be dealt with in sect. 20, here we consider the changes which the portraits have undergone.

The most perfectly preserved were buried in thoroughly dry ground with fine sand upon the face. Sometimes a cloth was laid over the face; but such material was generally injurious, owing to its readily carrying moisture and to the amount of air space in its texture. Fine dry sand is the most preservative of all materials.

A frequent cause of injury to the portrait was from the oil used in preserving the mummy. In one which I opened the whole body was saturated with oil, and the wrappings likewise. This oil soaked through the wood panel and darkened a part of the colours; this may be seen in the coloured plate iii and in the photographs 59, v, 46, v *a*, 21 and 4, vi *a*, and 18, vii *a*. Some have been rendered almost invisible by the brown stain of the oil. On the whole, the 1888 portraits were less injured by oil. As they were found farther out from the pyramid of Hawara it seems likely that they were later as a whole than the 1911 portraits; the experience of the damage to the earlier portraits, or a cheapening of the process, may have led to less oil being used in later times.

During the keeping of the portrait in the house, it suffered much in some instances from flaking, as in 9, v *a*, or 27, vii, due to exposure to weather. The mere accumulation of dirt upon it is easily cleaned off. Both water and spirit can be used freely for rubbing these wax surfaces without any injury. Ether or benzine would be the only solvents for the wax paint. Heavy blows and cuts with a chopper are found upon some of the portraits; these may partly have been due to accidental falls in the house, or careless handling in putting in a cart to go to the cemetery, or throwing out at the grave. No. 54 P has had violent blows cracking the wood, and 53, V, found with it, has been chopped with a sharp edge. It is possible that this was done to prevent the theft of the portraits when sent out of the house. No. 34, V has also had part of it knocked in.

Sometimes a coat of varnish was put over the portrait, as on No. 5, v *a*, when it turned dark red and was difficult to remove with spirit. In other cases a cloth was put over the face with melted resin, which required long softening and scraping to remove it, as on II viii.

13. The changes after burial were the more serious. About a third of the portraits buried have been mainly or entirely lost by decay. This was specially the case in the lower ground N.W. of the pyramid, where the rains ran down from the higher mounds. Ground which is perceptibly damp has in no case preserved a portrait. Sometimes white ants have destroyed portraits, or eaten a part as in No. 1, vii.

The lesser changes are the flaking loose of the paint from the wood, due to slight decay and shrinkage of the wood. In such cases it is sometimes impossible to tilt the panel without the paint falling off. There is no preservative so satisfactory as flooding over with melted paraffin wax; this must be hot enough to penetrate the cracks freely, but not so hot as to melt up the ancient wax paint. All surplus can be removed by scraping down and gentle melting. If the flakes of paint become shifted out of place, the waxed face can be slowly melted by hanging a hot iron just clear of it, and then the paint can be pressed down in position by a wet finger, and the surplus paraffin squeezed out. Any dirt on the face, which cannot be removed safely before paraffining, can be scraped away with the surplus paraffin, without any risk of shifting the film of ancient paint. This rewaxing with paraffin has been objected to by those who have not seen it, as changing the texture of the surface. But such is not the case; the details of brush marks or modelled lines are as distinct after as before rewaxing, unless the surface has been overheated and melted; and the paraffin wax is the only preservative which will not alter in course of time, which is colourless, which retains the brittle paint by a tough coat, and which makes the whole damp-proof. If there be an excess it can be removed at any time by gentle warmth.

Where the changes have been less, and the colour is only brittle and liable to slight crumbling, then a thin coat of paraffin has been added, by spreading over the face and rubbing into the cracks a soft butter of paraffin and benzine, about half and half. As the benzine evaporates, the paraffin can be gently melted into the cracks, and any surplus removed. This is equivalent to varnishing, for removing dullness and porosity of the surface due to decomposition, and rendering the colours clear and bright. No

colour has in any instance been added to any of the portraits, not even in parts where it could not cause any error.

The only change after burial, in some cases, has been a decomposition of the surface of the wax, while the lower parts of the colour are in good unchanged condition; this was probably due to damp. In such cases no solvent would remove the decomposed surface, as it is less soluble than the unaltered wax below. The only way to clean it is by scraping off the brittle coat with a sharp knife, while watching the action with a strong magnifier. Thus a dark brown coat was removed from 58, P, and a white coat from 8 P, without any erasure of the minute ridges of the paint; the surface structure constitutes the essential finish of the work in 8. None of the processes of preserving or cleaning the portraits has effaced any details of the colour or structure.

14. A much debated question has been whether these portraits were painted during life or after death. The opinion of Sir Cecil Smith from the artistic impression was that many of them had been painted from memory solely for the purpose of putting on the mummy (*Hawara*, 41).

A point of view which has not been fully examined before, is that of the condition of the portraits before they were put upon the mummies. In many instances it was obvious that they had been very roughly cut down. See the notch left in cutting the round top of 40, vi, or the false cut across the paint on the top of 38, P, or 11, vii. Unfortunately those reproduced from the National Gallery portraits of 1888 only shew the limit of the card mount, as the authorities would not allow those portraits to be taken out of the frames and bared for reproduction; those portraits (lettered in the Portfolio) are therefore not in evidence, but others of the 1888 portraits on pls. viii, ix, all shew the tops roughly cut down, except one (C, ix), where a gilt frame made the embalmers keep it whole. After carefully examining all the panels of the present portraits I can say that in every case they have been reduced at the top and sides since being painted; not a single painting was made on a panel adapted for placing on the mummy.

The explanatory example is No. 27, vii, where the side pieces (and the scraps cut off from the corners not here shown), were found beneath the portrait in the wrappings of the mummy. This mummy has altogether a strange history, as stated further on in sect. 17, but the essential facts here are the following. A square panel, not cut down, was painted with a good portrait, 27, P. This portrait was afterwards discarded. The panel was reversed, and a portrait of a different man painted upon it, 27, vii. Later, the sides were split off as shown in the photograph, and the corners cut down; and in this state—similar to all the other mummy panels—it was fixed upon the mummy. Here we see the original state of all the panels; they were almost square, this one being 14·92 and 15·20 high, and 13·05 inches wide (the splay shown is due to distortion in photographing); and then it was cut down to 9·9 and 9·4 wide, only two-thirds of the original size, and the corners cut away to fit the rounded top of the mummy.

15. Why should these panels have been thus roughly trimmed, instead of being made of the right size at first? It would have been much easier for the embalmer to have had panels made with evenly rounded tops, instead of always needing to hack them down without proper tools. The explanation is in the framed portrait which I found in 1888. In one tomb the portrait was not attached to the mummy, but was put by its side, in an Oxford frame with crossed corners, having a cord still attached to hang it up, and a groove for glass over the picture (*Hawara*, pl. xii). The frame is of the square proportions which we have seen to belong to the original size of these portraits.

This is positive proof that square portraits were hung up in the house. Such moveable portraits are indicated by an Athenian epitaph, saying that "her painted portrait we have dedicated in the shrine of Pallas whose servant she was; but to her body we have given an earthly tomb"; and a decree at Patmos honours a man by a "painted likeness" (Smith in *Hawara*, 41). The account of the portrait of Christ at Edessa is given in the Syriac and Armenian versions of the *Doctrina Addai*, claiming to be directly extracted from the library of Edessa. This at least shows that portable likenesses were familiar, and that copies of such were usual. Further, the Carpocratians had pictures painted in various colours, even gold and silver, which represented Pythagoras, Plato, Aristotle, and Christ from a picture said to be painted under Pontius Pilate; this is stated by Epiphenius of Cyprus in his Refutation of Heresies. I owe these references to Miss Eckenstein.

As all of these Hawara portraits have been cut down from a square form, we are bound to regard

them as having been originally painted to be hung in the house. After the death of a man his portrait would be sent along with the body to the embalmer, and was then cut down to the size and form required to fit the mummy. Hence these were all life portraits, and not painted from memory after death. On one found at Gharaq (Edgar *Catalogue* xvi) there were memoranda of the features written on the back ; but that does not at all imply that it was painted after death, but only that after the first sketch in black outline the colours were blocked in elsewhere before the final sitting to complete the portrait. Of course it is possible to say that because square panels were used for life portraits therefore as a matter of habit they were used for death portraits ; but as there is no trace of evidence of that, we are bound to conclude that the death portrait was at least very unusual, as the embalmer never cut his panel to the required shape before it was painted.

Further, the interest of keeping the portrait in the house was so strong, that in some cases the portraits were removed from the mummies before they were buried. In a group burial of Nos. 33, 34, 35, of which 34 is on pl. v, there were also two mummies of which the portraits had been removed before burial, leaving an empty space amid the wrappings. Much attention had been given to one of these, as when its wrappings had become ragged from long exposure, a second cloth had been added over the whole with an oval opening to shew the portrait, and two demotic inscriptions were written upon it. These, given on pl. xxiv, 3 and 4, record two different persons. No. 3 is along the body, and is read by Sir Herbert Thompson as "Arsinoe daughter of Herakleitos the woman of Hawara"; while No. 4 is across the ankles, reading "Premiom (the lake man) son of Huy, Hawara." The place across the ankles is that of inscriptions on two other mummies, and that inscription is therefore probably the original, while Arsinoe may have been the widow, whose name was added as owning the mummy. See sect. 48.

In another instance a mummy had a gilt stucco bust and border round the face. Within this a portrait had been inserted and fastened in with resin: but it had been removed before burial, only leaving a resined surface. The mummy lay with head to west, and was much rotted.

16. The portraiture of these paintings will be put in a clearer light when we can compare them with the actual heads of the persons. Most of the mummies which were not kept entire with the portraits had the heads removed and sent to Prof. Macalister at Cambridge, marked C in the table pl. xxvi. Of these 7 are reproduced in colour, and 10 in photograph. When the heads have been cleaned, and restored to their natural fullness by Prof. Macalister's process, it will be possible to compare the portrait with the actual person, and to estimate the relation between them, and the defects of each mode of presentation.

17. The history of mummy 27 is strange. It was first bandaged in the usual rhombic bandaging, and had portrait 37, P upon it. This is peculiar, as being one of the rare cross-grained portraits, of which there is only one other instance this year, 46, V *a*, and one in 1888 marked O O, pl. viii. Later, this portrait was removed, and split to pieces. The pieces were pushed into the wrappings, and so put out of sight. Then the whole mummy was rewrapped with a fresh rhombic bandaging. Portrait 27, P had been reversed before it was trimmed down, and another portrait painted on the back, 27, vii. This portrait was then cut down, and inserted over the head of the mummy in the second bandaging, and the pieces which were trimmed off it were stuck into the wrappings. As the portrait 27, vii had been painted while the panel of 27, P was full square, it is probable that it was done during life and hung up. The reversal of the panel has then no connection with the rewrapping of the mummy to which the first portrait 37, P belonged. It seems as if the embalmer took a complete portrait mummy, which he had either stolen when sent to be buried, or which remained on his hands unpaid for, and he had then broken up and hidden the portrait, and rewrapped the mummy with the third portrait 27, vii turned outwards.

18. In a few cases the names of the persons have been preserved. The most important of these is that of Hermione the Grammatikē, or teacher of the classics, whose name and title are painted in white on the ground of the portrait pl. ii. This is the only instance known of a mummy or portrait of a woman teacher ; it now appropriately rests in the library of Girton College.

Another name, written in ink on the bandages, is shown on pl. x, 3. It is of "Herōn son of Ammonios, . . . losophoros" ; the last word should be the title or profession, and it is tempting to see in it the Philosophoros or bearer of Philosophia ; much as Apollonios at the toll-gate on the Euphrates

said that he was accompanied by Sophrosyne, Dikaiosyne, and other virtues (*Philostratos*, *Life of Apollonios* i, xx).

It is noteworthy that two out of four names preserved to us are of teachers. It seems as if they were retainers of the families, whose names it was thought needful to add because they might be forgotten sooner than those of ancestors.

Another name, also without a portrait, is that of Demetria, who died aged 30. This has no connection with the painted mummy which is on the same plate, pl. xii.

The most striking figure of all is that named as Demetris aged 89; the portrait is 51, P, and the cover is of red-painted cloth with gilt figures, drawn on plate, pl. xxi.

A finely modelled stucco head, gilt, with a chest robed like that of the figure pl. x, 1, (but with bare arms and serpent bracelets,) had inscribed on the head band "Arsous years 25 . . . sei kyria." The body was covered with an elaborately painted cloth with figures of gods. (Manchester.)

## CHAPTER III

### METHODS OF PAINTING.

19. THE discussions in the past on the method of painting in wax have not led to a general agreement; this may be partly due to an endeavour to accommodate the description given by Pliny of the methods followed in Italy, so as to explain the work found in the very different climate of Egypt. In Egypt coloured wax can readily be melted in the sun during most of the year, and would often be near melting point in the shade; in Italy such conditions would be so rare as not to influence the method of using it. Hence it seemed well on this opportunity to examine the question afresh with the present collection. I have carefully searched each picture with a magnifier to observe all traces of the method of work. This proves to be so far uniform that we may describe the type as a whole, and then state what examples depart from it. Such is always the best way of dealing with a mass of details, as it clears the ground for students and enables the results and exceptions to be grasped at once, without each reader having to try to reduce a mass of notes to order. The conclusions are closely the same as those of Sir Cecil Smith and myself previously (*Hawara*, 18, 19, 38).

20. The type of the method of painting may be stated as follows. A panel of wood, of smooth straight grain, free from knots, was cut to about 13 or 14 inches wide and 15 inches high, with the grain upright. This was the size kept for framing; and later on it was reduced by splitting off about a third of the width, and truncating the top corners, when the picture was trimmed to be placed on the mummy.

On this panel the subject was outlined in thin black wash, the eyes and mouth being shown. This is most clearly seen where the paint has weathered away, as on 27, vi; and traces of the outline can often be found on bare wood left between the background and figure, or at the edges of the hair.

The grey background was then brushed on, always quite liquid, with a free brush, sometime so thinly as to leave small resist-bubbles on the wood which has not taken the paint. The background does not run over the outline, but keeps outside of it; the brush always ran round the outline, though the wider parts were usually brushed over with horizontal strokes, or sloping. The ground is never stubbed on with stiff colour.

The drapery was put on with liquid colour and a free brush, like the background. The brush was wide enough to expand over about ¾ inch when pressed; colour was never rubbed on the wood, but flowed freely from a moderately full brush, leaving hair strokes all over it.

The flesh was treated differently, and never shows free brush marks. It was laid on in a creamy state by a tool about ¼ inch diameter with a soft rounded end. The most obvious tool for this would be a small brush solidified with wax, and dipped into melted wax to take up some clinging round it. Such a tool would account for every form of the surface that I have observed, and there is no trace of a flat tool with hard edge such as a palette knife, or other metal instrument. There can be no question that the capacities of work with a stiffened brush must have been very familiar to anyone painting with melted wax; the stiff brush would be only too often a trouble, and how to make use of it would be the first thing to learn in such a process. We may reasonably conclude that as the common use of the free brush is proved by the drapery, so the capabilities of the solid brush would be tried fully before adopting some entirely different tool. One of the most important examples is No. 37, P. On the flesh below the neck may be seen three different layings

of colour ; there is the broad wavy stroke, zigzagging down, a free adaptation of the parallel strokes one below the other ; there is the patting by a broad wet surface, such as the side of a brush, to leave more paint sticking on the surface, broken up by the clinging contact of the creamy paint ; and there are rarely some strokes which just resolve into hair streaks, as from a solid brush which had slightly melted at the end. We do not need to suppose that the brush was quite hard throughout, but only that it was solid in the main, so as to prevent the hairs spreading out, while the hair marks of the tips would be hidden by the full flow of the creamy paint. Were the brush used quite free, trusting only to the full colour hiding the lines, we should often find thinner parts showing hair marks, and the quantity of flowing colour would make the separate strokes run together. On the contrary each touch of the tool is quite distinct, though they may be parallels only $\frac{1}{8}$ or $\frac{1}{6}$ of an inch apart, showing that the colour was in a stiffish cream, and that the laying point was quite narrow. The idea that it leaves is that of a brush about $\frac{1}{4}$ inch diameter, barely solid with wax, the end melting as dipped into creamy wax, which clung over it and drained down to the point.

The hair of the portrait is usually curly, and put on by a small brush with free liquid colour, in narrow lines of $\frac{1}{8}$ to $\frac{1}{20}$ of an inch. It sometimes does not cover the wood, which can be seen between the lines, proving that no ground colour was laid first.

In parts there is seen the use of a hard point, to break up outlines, and render them less hard, by a zigzag scratching through the colour. Probably this would be done by a pointed end to the brush handle ; to lay down the brush and pick up a separate tool would not be handy when working in a material which stiffened while in use.

21. Now that the type is defined the small variations from it may be noticed.

1. vii. Drapery in long creamy strokes, not showing brush hairs.

2, P. Hair laid on creamy, as the flesh.

3, P. Cross hatching on flesh.

4, vi A. Drapery laid on creamy with solid brush.

5, V A. Grey ground laid on after flesh and hair. Hair laid creamy.

6, pl. iii. Thin smooth colour, no brush strokes visible in drapery on ground : on flesh, fine hatching with very thin colour, red, light flesh tint, and grey.

8, P. Flesh thickly laid with uniform wax, a dark brown dry priming coat below it. The most remarkable example of detail in the modelling of the mouth and chin.

10. Thin colour laid smooth.

12, P. Outlines in broad black lines on the canvas, left showing for shadows. Blue-grey background laid after the flesh. Flesh smooth, canvas hidden by colour.

13, ii. Canvas showing through colour. Hair lightened with brown-grey touches on black.

19, vii A. Ground thin, rather creamy, no brush lines. Elaborate hatching of thin colour, light red, yellow and white, on the flesh, to give texture. All parts thin and smooth.

21, vi A. Ground worked creamy zigzag down the outline.

23, v. Thick pine panel, square, not cut down. Gilt lips, wreath, earrings and necklace, cut out of gold foil. Ground colour laid up to half an inch from the edges of the panel, bare wood beyond. Hair laid thin with brown lights on it.

28, vii A. Drab background brushed down below shoulder drapery, and not close enough to outline of face, but patched later than flesh. Hair laid with half-solid brush, often showing bristles.

31. See below.

34, v. Flesh painted thin with brush lines curving in different directions ; hardly any creamy colour or solid brush used.

37, P. Cross-grained panel. Eyes, etc., have flaked off owing to splitting up the panel ; traces of black outlining on wood beneath.

40, vi. Dark grounding under flesh. Hair laid over flesh. Gold leaves of wreath outlined by point through wax, a brittle (stucco ?) body put on and gilt. Hard point used for eyebrows and joggling down edge of shoulder.

42, vi. Flesh thin and smooth, no traces of thick cream or of brush-work. Brush-marks on neck and drapery.

43, vi. Flesh thin except on high lights. Drapery smooth without brush-strokes. Very thin red bands upon it.

45, P. Sides somewhat cut down, but still $11\frac{1}{2}$ inches wide. Background patched round outline with lighter tint.

46, v A. Cross-grained panel. Sides very roughly chipped away to reduce width. Background laid with solid brush and creamy paint, exactly like the flesh ; the only instance of this. Red robe swept by the brush over the background and flesh. Upper

part entirely discoloured with oil. Peculiarly soft vague forms of features.

49. Drapery thin, no brush-lines. Black priming on lower part, but not under face.

50, P. Neck, loose brush-work. Bare wood left between curls of hair.

51, P. Grey ground very thin, laid on after flesh. Hair black curls and white curls over them. Drapery thin and laid on very liquid, with no trace of hair-lines of brush.

53, v. Brush-lines on neck.

56, P. Panel cut originally for box-making. Two pairs of grooves scored on back, each pair 0·94 apart, and 9·3 between pairs. Three holes between each pair of grooves about $2\frac{1}{2}$ inches apart.

57, iv. Careless at edges, gaps of wood left and overlaps of paint. Drapery carried across flesh in two places.

59, v. Grey ground brushed thinly across. Flesh thin and smooth, only creamy in high lights.

60, vii. Drab priming very thin under drapery.

22. No. 31 is painted in an entirely different method. A square of canvas covered with a thin stopping of stucco was the base for the picture, which was painted in distemper. When put on the mummy the edges and corners were turned back to reduce the size. It was buried in somewhat damp ground, so that the cloth laid over the portrait had become a soft brown mass sticking to the face, and the canvas of the portrait had scarcely any firmness. A first attempt to remove the top cloth showed that all the colour and stucco would come away with it. The whole of the front about $1\frac{1}{2}$ inches thick was therefore removed from the head, by sawing through the rotten canvas, which made hardly any resistance. The front was then soaked with hot paraffin so as to sink in about $\frac{1}{4}$ of an inch. The back layers could then be peeled away, and so the turned-in edge of the painting was found in passable condition. Lastly, by careful scraping, the adherent face-cloth could be removed without destroying the paint below it. The portrait at last exposed is of course much altered in tone by the paraffin, but it could not otherwise be preserved at all; its original texture can be seen on the part turned back. That appears most like a modern pastel drawing, with a matt surface, entirely of body-colour. It is likely that this was the method followed in the great Greek paintings, which were so readily portable, and were hung upon walls. These paintings could hardly have been upon wooden panels, considering their size; nor could they have been on marble slabs (like the outlines from Herculaneum) owing to the weight. The transport of large numbers—as from the sack of Athens to Rome—shows that they were safely moveable. Here we have an example of a method which agrees with the known conditions; and it is more than a coincidence that the style of this picture in the features, the head-dress, and the whole aspect, is far more Hellenic than the other portraits, which are Italian in feeling.

23. It is remarkable that there is so little likeness between the portraits which were found buried together. In the group 2, P, 3, P, 4, vi A there is no resemblance, nor is there any apparent connection between the pairs 12, P, 13, ii; 18, vii A, 19, vii A; 8, P, 9, VA; 20, 21, vi A; 33, 34, v; 49, 50, P. Possibly 8, P might be the son of 9, VA, and certainly 53, v is the daughter of 54, P, with whom it was found, and both portraits are by the same artist.

As a question of style it appears that 38, P and 56, P are by the same hand, as shown by the treatment of the hair. 42, vi and 43, vi are obviously alike in style, and in the method of their painting. Two portraits of girls, 29, vi A and 21, vi A are the same in the dressing of the hair, full and smoothed, with a central boss, and a curl down before the ear, and in the accentuation of the mouth and a line of dark red below the lower eyelid; moreover they wear the same jewellery, earrings, beryl and gold necklace, and gold chain with pendant, though 29 has two other necklaces also. They might be of the same family, and certainly seem done by the same artist. The hair and the form of mouth and earrings would point to the same hand in 54, P, whom we also recognise otherwise in 53, v. The same hair is seen in 18, vii A, with necklaces similar—though not the same—as in 21 and 29; the mouth differs, but this detail, as well as the nose, is like that of 53, v, which from other reasons belongs to this group. I should therefore incline to attribute 18, 21, 29, 53 and 54 all to the same artist.

A strange resemblance in method is seen between one of the best portraits 6 iii, and one of the worst 19 vii A. Both are painted in thin colour, and have a free use of very thin hatching of other tints on the flesh. The painter of 19 must have imitated the method of the artist of 6, and seems therefore not far removed in date. Cross hatching is certainly early, as it occurs on the canvas bust portrait (*Hawara*, 17) which is the transition from the gilded busts.

24. Regarding the various types of earrings it does not seem that they were altogether successive,

but were partly in use at the same time. In *Hawara*, p. 19, the order of introduction stated agrees with what we now find as the order of extinction, namely ball, hoop and then pendant; but the dating there given should be extended somewhat earlier. The bar with two pendant pearls often occurs in Pompeian paintings, and must therefore be as early as 79 A.D. We may examine the types on the ground of the quality of the portraits, or on the ground of the successive styles of hair-dressing described in the next chapter on the dating.

Classing the portraits by quality we find :—

| | Ball-earring. | Hoop. | Pendant. |
|---|---|---|---|
| Good . . . | 5 | 3 | 2 |
| Medium . . | 1 | 0 | 5 |
| Poor . . . | 0 | 1 | 1 |

Here the ball-earring is always with good painting, the pendants generally with inferior work.

Classed by the style of hair (which may belong to later dates than in Rome) :—

| | Ball. | Hoop. | Pendant. |
|---|---|---|---|
| Flavian . . | 3 (6) | 1 (2) | 2 (3) |
| Traj.-Hadrian . | 1 | 1 (2) | 3 |
| Antonine. . | 0 | (1) | (1) |
| Commodus . | 0 | 0 | 1 (3) |

The numbers in brackets are including those previously illustrated in *Hawara*.

The conclusion here again is that the ball-earring is only found in the earlier class, and the pendant increases in use later.

Regarding the necklaces, including those in *Hawara*, the ball-earrings have no necklace in three instances, a plain gold chain in five instances, and only in one instance two rows of pearl and beryl. A crescent pendant is on the necklace in five instances, and never with any other type of earring.

The hoop-earrings have generally with them the simpler forms of beryl necklace.

The pendant-earrings go with the more complex and gaudy forms of necklaces.

The earlier portraits therefore have only plain gold necklaces, and often crescent pendants; the stone necklaces and more complex ones came later.

## CHAPTER IV

### THE PERIOD AND PEOPLE.

25. The indications of date connected with these portraits are indirect and seldom exact. The data for previous styles are :—

(A) Wedge-faced mummy before papyrus of Tiberius 14–37 A.D. (*Hawara*, 16).

(B) Gilt-faced head-piece with Flavian name (*Hawara*, 16).

The data for the portraits are :—

(C) The Pollius Soter series of the age of Hadrian, Louvre (*Hawara*, 16).

(D) Papyrus copy of register of 127 A.D. on No. 18.

(E) Inscription of Kephalion (pl. xx, 7), older than Nos. 7, 8, 9.

(F) Style of hair-dressing of women.

(G) General style and hair of men.

All of these are vague as to date. (A) The wedge-faced mummy might have been long buried before the papyrus was written, or the papyrus might be a century old in rubbish thrown over the mummy. (B) The gilt-faced head-piece of Titos Flavios Demetrios might be as early as 70 A.D., if the man died immediately on taking the imperial name; or he might as an infant be named after Titus, 80 A.D., and have lived to 140 A.D. or more. This head-piece is probably before the portraits, but it might be coeval with them. (C) The portraits of the family of Pollius Soter, who was archon at Thebes under Hadrian, give a fairly dated point of about 140 A.D.

(D) The papyrus containing copies of official registers of 127 A.D. was folded up, and placed under the border of portrait 18, vii A. The papyrus might be of 127 A.D., and the portrait painted long before, and only buried then. Or the registers are more likely to have been searched and copied at a later time, perhaps 200 A.D.; and the papyrus might have been kept for a generation later. (E) The inscription of Kephalion (pl. xx, 7) was turned face down and built into the foot of a wall which was apparently of the same age as the burial of Nos. 7, 8, 9 adjacent. The omega with the open base occurs under Nero (*Illahun* xxxii), Vespasian (*Ill.* xxxii), Titus (*Milne Hist.* 187) and Antoninus (*Milne* 194). The ω form appears as early as 24 B.C. (*Milne* 183) and onwards in the first century (*Milne* 184, 185; Koptos xxvii). It was known in Greece as early as Alexander.

26. (F) The style of the hair-dressing of the women has been principally studied by Mr. Edgar (*Catalogue . . . Graeco-Egyptian . . . Portraits*, pp. xiv, xv), and he bases the dating upon that. A portrait could not be of an earlier date than when a certain style which is shown in it came into Imperial fashion. But fashion might linger in the Fayum long after it changed in Rome, where the main styles were about forty years apart. There were no fashion plates, and

it must have been from the elderly wives of high officials that remote provincials copied the style. A girl born about 80 A.D. would be brought up in Rome 95–100 A.D., with Flavian hair-dressing of rows of little curls. She might well be fifty when her husband got his province, and she held her receptions which set the fashion, 130 A.D. Her style copied by provincial girls of fifteen would be continued by them, and they would be painted some twenty years later or more. Thus the Roman fashion started about 80 might appear on portraits of 150 A.D. or seventy years later, and the style of hair-dressing would easily lag fifty years behind that of the Empresses.

(G) The men's fashions of shaving, or of beards (which were begun by Hadrian), of thick hair, or close-cropped heads (which began with Severus Alexander), are more likely to be contemporary with Rome. The Emperor was a very familiar figure on all the coins, and the Imperial statues were in every town. And besides the personal imitation of the Emperor, there is much in the style and air of the painting which harmonizes with the manner of the ruler. We only have to see how many of the xviiith-century portraits were like George III, or how Austrian portraits resemble Francis Joseph, to perceive the style set by the sovereign.

The beginning of the portraits is set by Mr. Edgar to the Claudian fashion. But the only two which he refers to this (Nos. 33265, 33268) have only simple waved hair, such as any woman might naturally wear; and are without any of the sharp furrows and fussy ear-bunches which he quotes as the Claudian type on a gilt head (33126). The evidence seems rather to be that the gilt head is Claudian, and the portraits are a simple dressing, like 13, ii here, which would be kept by anyone not adopting the Flavian elaboration. These three may well be merely a quiet style, without any deliberate fashion.

The first distinct fashion is that of rows of small curls all round the forehead, as in the Flavian age 5, v A; Cairo, v A; 31, P; 50, P; 51, P; ? 59, v here, and 55 unpublished.

Next appears the hair smoothly parted away to either side, with sometimes a knob of hair at the top; this is referred by Mr. Edgar to the age of Trajan and Hadrian, though the upright diadem of Plotina Matidia or Sabina is never copied. Of this style are 18, vii A; 21, vi A; 29, vi A; 53, V; 54, P; and 44. Perhaps the close wavy hair of 23, V should be referred to Julia Domna as a comparison. No others appear to be as late as this.

27. The relation between these styles and the quality of the portraits already listed should be noted; and also the relation to the gilt foot-cases and buttons:

| | Flavian. | | Traj.-Had. | | Later. | |
|---|---|---|---|---|---|---|
| Good . . . | 7 | | 0 | | 0 | |
| Medium . . . | 0 | | 5 | | 0 | |
| Poor . . . | 0 | | 1 | | 1 | |
| | + | − | + | − | + | − |
| Gilt feet . . . | 1 | 5 | 2 | 4 | 1 | 0 |
| Button in rhomb . | 2 | 4 | 3 | 3 | 1 | 0 |
| Rows of Buttons . | 1 | 5 | 1 | 5 | | |

Thus we see that all the portraits with Flavian hair are good, and those of Trajan—Hadrian or later are medium or poor. This is a very sharp grouping, on grounds which are entirely independent one from another. Only one Flavian has gilt feet and buttons, 50, P; but they are on nearly half of the later mummies.

28. Now turning to the men's portraits, I have considered general style in relation to the Emperors as well as precise fashion. The groups appear to be:

Shaven; before Hadrian, unless youths. 36, i and 45, P are of this class; but the young men 1 vii; 2, P; 38, P; 40, vi; 57 iv might some of them be naturally beardless. For the present we leave them here. Hadrianic beard, 8, P; 11, vii; 37, P; 17; 49; Antonine beard, 27, P; 28 vii A; 56, P. Aurelian beard, 3, P; 9, v A; 19 vii A (Verus) 34, V. Caracalla beard, 39. Cropped, Balbinus style, 52, vii A; Sev. Alex. style, 60, vii. Now comparing these—as we did the women—with the other indications:

| | Flavian. | | Hadrian. | | Antonine. | | Aurelian. | | Later. | |
|---|---|---|---|---|---|---|---|---|---|---|
| Good . . . | 6 | | 3 | | 2 | | 2 | | 0 | |
| Medium . . | 0 | | 2 | | 0 | | 1 | | 0 | |
| Poor . . . | 1 | | 0 | | 1 | | 1 | | 3 | |
| | + | − | + | − | + | − | + | − | + | − |
| Gilt feet . . | 1 | 3 | 1 | 4 | 1 | 2 | 2 | 2 | 0 | 2 |
| Button in rhomb | 3 | 3 | 0 | 4 | 2 | 1 | 1 | 2 | 0 | 2 |
| Rows of Buttons | 3 | 3 | 0 | 2 | 1 | 2 | 1 | 2 | 0 | 1 |

Here the quality of the portraits steadily deteriorates through the five periods. Yet in the decoration there is a balance of with and without all through, whereas among women the earlier mummies were certainly simpler. Probably we should account for the position thus. We saw before that by the direction of the mummies those of women were more usual in the early time, and men in the later. Hence if we suppose that the gilt decorations came into use in the middle of the Flavian style, and women's portraits

became less common then, the Flavian style of women will have little decoration, while men's mummies were commoner in the later Flavian when gilt decoration had come into use. This divided the Flavian age into two periods: (1) women's portraits commonest, and no gilding; (2) men's portraits more usual, and gilding.

29. So far we have only dealt with general labels of style, Flavian, Antonine, etc.; but we ought to translate those into dates. Though the limits of possibility are wide, yet it seems most probable that we should view the facts as follows:

Wedge-faced mummy, 40 A.D. and onwards. Papyrus of Tiberius ten or twenty years old when lost in filling grave.

Gilt-faced head-piece of Titos Flavios, 100 A.D., twenty or thirty years after he took the name.

Papyrus about 160 A.D., copy of register of 127 A.D., buried 180 A.D. with woman No. 18, along with man imitating Verus of 170 A.D.

Style of women's hair about a generation after Roman fashion. Say Flavian 100–130 A.D., Trajan—Hadrian 130–170 A.D., Antonine 170–190 A.D., Aurelian 190–210 A.D.

Style of men ten years after Imperial fashion. Shaven 100–130 A.D., Hadrian style 130–150, Antonine 150–170, Aurelian 170–190 A.D.

Such seems the most probable adjustment of the facts, looking to the chances of variation by different causes.

So in general terms we should place the Hawara portraits of good work 100–150 A.D., medium 150–200 A.D., poor 200–250 A.D., thus closely agreeing with the general art of that age.

30. The variety of race shown is considerable. The population of the Fayum margin was Egyptian; the Ptolemies had dried up the Lake and planted colonies of veterans upon the reclaimed land. This Greek population had then been mixed with various other people in course of the cosmopolitan trade that went on. There seems very little of the Egyptian element, only No. 2 shows an African touch. The Greek apparently predominates, as in 12, 13, 31, 51, 57, 58; the few names that are found are also Greek. No. 5 with long curls is probably Macedonian, and 11 and 27 are both apparently northern types. The Italian is seen in the fair boy 25 and probably in 42, 43, 45, 53, 54; the south Italian in 19 and 59. 36 has the mode of hair, the low head and wide face, of Trajan, and is therefore probably Spanish; but a resemblance to the Moor or Shawyeh type suggests a Moresque Spaniard. The caste mark on No. 3 points to an eastern connection, but the type is northern rather than southern, therefore perhaps Syrian. No. 29 has been noted by many observers as Indian in style, and perhaps also 21. Indians were apparently much admired; for at Koptos, the port of the Indian trade, there was a very heavy duty on women coming in from the Red Sea, shewing that there was a great demand for them. Thus the various types seen here, ranging from Spain to India, accord with the mixture of people that was going on through the active commercial intercourse of the Roman Empire.

## CHAPTER V

### THE WRAPPING OF MUMMIES.

31. In this chapter will be placed together the details of the wrappings of the mummies, external and internal.

The diagonal winding of the bandages around the mummy became developed into a complex system; and the triumphs of this decoration seem almost incredibly skilful. The diagonal lines of bandage were in a few cases square with each other; but almost always they met in a rhombic form, and hence this style is called the rhombic bandage, and the number of layers in the rhomb is noted. A very fine example, almost square, is that of Herōn (pl. x, 3) which has thirteen layers of different colours. The portion shown here is turned with the mummy diagonal to the page, in order to place the inscription level. The most perfect example is the girl's mummy (xi, 2) now at Liverpool. The portrait is unfortunately much spoiled, but it has been one of the best heads of children known. The bandaging is perfectly regular over the body, and round the head and below the feet, without a single flaw in the system; yet without any adhesive, or sewing, or pins, to retain the strips in place over the corners and curves. The layers of the bandages are, gilt on the outside, then red, white, red, white, red, white, blue, white, red, white, brown, white, thirteen layers in all.

32. A development of this system began with placing a piece of base gold-foil at the bottom of each rhomb, so as to show in the middle space. A very fine example of such wrapping was found at Hawara (pl. xiii, 4) and kept at Cairo, as this stage was unknown before. The pieces of gold-foil were about 2 inches square, but only about ½ inch square was visible. The idea appears to have been

that the mummy was cased in gold, and the wrappings put on so as to show the gold in patches all over it. This mummy is a remarkably perfect example of bandaging, especially over the wedge-face, in layers of different colours. The V pattern over the legs is seen on a larger scale in pl. xi, 1, on a rather later mummy. Sometimes different colours were used so as to make two sides of each rhomb coloured and two white.

The next development was that of omitting the gold-foil, which was almost hidden in the bottom of the rhombs, and putting on a button or boss, gilded, in the centre of each rhomb. The earliest of these were larger, as seen in xi, 7. But they immediately shrank to the usual size shown in x, 2; xi, 3, and xiv. These buttons were of stucco painted yellow, and having a square scrap of gold-leaf on the top. They were stuck on to squares of cloth stiffened with stucco and coloured usually red, sometimes blue. These squares were about 1½ inches in the side, the buttons being about half that in diameter. They were laid on the mummy symmetrically, and held in place by the first layer of bandages, which crossed over the plain sides of the square close up to the button. Having thus a supply of easily applied gilding, it was used senselessly by putting buttons in rows across the chest, plainly showing the coloured squares around them, sometimes one row (x, 2; xi, 3; xiv), or two rows (x, 1) or even three rows as on portrait mummy 55.

33. Another form of decoration was by enveloping the whole body in a smooth decorated cloth. There were two forms of this, either a red cloth stiffened, or made up by stucco as a red case, with a few large gilt figures on it; or a thin cloth with red ground and rows of figures gilt or coloured.

The red cover was found on two portrait mummies of this year, 1 (xi. 4) and 51, the gilt figures of which were copied on pl. xxi. No. 1 has the two *uza* eyes of Horus; two Horus hawks; Maat with spread wings; Osiris, lord of the pure place, or temple; and another winged figure now partly lost. No. 51 has the two Horus hawks; a pendant shrine of Sebek-Ra; the four sons of Horus; the goddess Maat; the name "Demetris, years 89"; and an ornament copied from the wreaths of leaves which used to be placed on the bodies in Ptolemaic times, between two serpents. A more elaborate form of this decoration is the hard red stucco case polished, of which three were found in 1888; one named Thermoutharin (Edgar *Catalogue*, xxxii) in Cairo; another named Artemidoros, in the British Museum (*Guide*, 1st and 2nd room, xxii), and a third, of another Artemidoros. (Ancoats Museum, Manchester.)

Of the same system, though plainer, are some single cloths placed over portrait mummies, with openings to show the portraits. The paintings had been anciently removed; one of the cloths has two inscriptions on it in demotic (xxiv, 3, 4).

In the other systems of decorated cloth it was thin, and only painted and gilded. Such is shown on the gilt-head mummy xiii, 5 (Manchester), which by the hair would be of about 100 A.D. The red cloth with gilt figures of gods was placed over the rhombic bandaging on 46, over the bandaging of the chest only in 43, and as a strip around the sides of the mummy in 29, 45 and 50.

Another decoration was a red cloth over a mummy, which had a stucco head-piece with gilt face and white drapery (xii). On the cloth was painted a deep collar, and below it a figure of the deceased man, clad in a white toga with a stole of black and colours, the prototype of ecclesiastical vestments. At the sides are the two hawks and two serpents as seen on the other painted cloths. In the hands are a long rod speckled black and white, and a bunch of herbs. (Dublin.)

34. The stucco coverings of the head and feet descend from much earlier usage, cartonnage head-covers being found even in the pyramid period. In the Ptolemaic age such were made of cloth or papyrus, stiffened by a thin coat of stucco inside and out. This covering was made much stouter in Roman times, with a hard polished surface, and covered with sacred figures on the head (x, 4), and with two or four bound captives under the feet (x, 5). An example, which by the style of the hair and necklace is dated to about 100 A.D., is seen in pl. xiv (Edinburgh). Apparently of the same age is the gilt bust xiii, 5 (Manchester). In this the feet are well modelled. Of earlier date is the foot-case which is actually cast from the feet of a girl, xi, 7 (Univ. Coll. Lond.), with black sandal straps and gilt twisted anklets ending in lions' heads. This stage is only known by this example.

The full bust of gilt stucco is well shown in two of men, x, 1 (Brussels), and 2 (Edinburgh), which by the other examples might be of about 120 A.D.

Over the mummies there were usually wreaths of flowers laid, the more compact of which are shown in xi, 5, 6. Usually they were lighter and more straggling. Prof. Newberry has examined all the

material collected both from these wreaths and also from the padding of crocodile mummies. There was but little to be added to his previous study in *Hawara*, pp. 46–53.

35. So far, we have only dealt with the external appearance of the mummies; the question remains in what way was the bulk and the weight—often over a hundredweight—made up. To study this takes a long time, the complete unwrapping and recording of one mummy being a matter of half a day's hard work for two or three observers. We did thus completely (1) a mummy with gilt head-piece, taking measurements of 196 pieces of linen, and noting every detail; we then did (2) a mummy which had originally had portrait 27 on it, and was later rewrapped, noting each layer of cloths; also (3) a beautifully wrapped mummy of a woman with every cloth clean and separate. Having learned the general system I examined briefly (4) Demetria—inscription pl. xii, (5) the mummy of portrait 49, and (6) a gilt-face mummy of a man; these latter three I explored by cutting through the wrappings down the side and noting the nature of the layers.

The wrapping of the mummies is of many different sorts. The large covers are either cloths laid under the mummy and turned up over it round the sides, denoted as C; or shroud cloths laid over the mummy and tucked in round below, denoted as S. The bulk is made up largely of pads, P, of every shape and size, folded over anywhere between two and thirty-two thicknesses, and of any degree of coarseness. The mass is held together by many spiral turns, T, of narrow strips; or by bands over head to feet, B, tied at intervals. On every mummy is a special band up the front, split into a Y on the chest, the ends tied behind the neck, and often split at the feet and tied round them; this forked tie, Y, is a constant landmark in the mass of wraps, about half-way through.

With this notation we can readily compare the wrappings of several mummies, in order to see if there was any system usually followed. On pl. xxi are nine columns, recording the wrapping of as many different mummies. It is at once evident that there are several constant points in all of them, both the xiith dynasty and the Roman. These are most plainly seen in the last column where there are fewest cloths. There is the outer shroud S; a great swathing of about twenty to fifty turns, T; the Y tie up the front; padding, P, lower down; and another great mass of turns, T, of swathing, holding the innermost group of cloths together. Many of the mummies agree in intermediate details, as will be readily seen by the same letter following on the same line.

36. The mummy with the gilt head-case (Bristol) in the fourth column, being the most elaborate and the most completely recorded, will now be described in detail. All figures after the subject are inches.

Outside size of wrappings $60\frac{1}{2} \times 16 \times 7$.

Gilt head-piece with raised figures of gods modelled in stucco.

Gilt foot-case removed anciently.

Rhombic bandages, seven layers deep, ten rhombs on length of body. Each strip formed by folding double and putting folded edge next to buttons; top strip folded triple, so as to leave both edges smooth. Lower strips not much wider than upper, leaving wide spaces between rhombs of lower layers. Gilt buttons, with small square patch of gilding on ochre yellow button.

1. Outer rhombic bands, top layer ·4 wide, made of strips 1·0 wide.

2. Around edges of body a band, wide $4\frac{1}{2}$ to 5.

3. Double tie round neck, 2 wide, hanked, long 72.

4. Cloth resined on under body (warp length always stated first), $51 \times 18$.

5. Lower rhombic bands, 1 wide, folded down middle. Pads of loose thread down edges of body under rhombs. Bands end by winding round feet over top of foot-case. Gilt buttons on squares of cloth 1·3 wide, beneath rhombs.

6. Over body, piece with one selfedge, $44 \times 20\frac{1}{2}$.

7. Strip wound around, ending at shoulder, one selfedge, two reverses. Made from a strip 33 wide, with fringe on one edge, torn into a band 8 wide.

8. Two loose pads (*a*) folded in four, $21 \times 15$.
(*b*) scrap of 7 with fringe, $37 \times 2$.

9. Long spiral bandage beginning at shoulders ending in middle, raw edges, fringe on both ends, $194 \times 2\frac{1}{2}$.

10. Spiral bandage end at ankles up to middle and down again, a knot at 153: fringe at one edge and at knot, long 409.

11. Four strips down front, put in during winding of 10, $22 \times 15$, $36 \times 3\frac{1}{2}$, $36 \times 2\frac{1}{2}$, $36 \times 2\frac{1}{2}$.

12. Loose pads in front: (*a*) $37 \times 3$ quartered; (*b*) $22 \times 9\frac{1}{2}$, one selfedge, one fringe; (*c*) $22 \times 14\frac{1}{2}$, one selfedge; (*d*) $37 \times 11$, one selfedge; (*e*) $36 \times 8$; (*f*) $39 \times 26$, folded in four, selfedge at end; (*g*) $37 \times 30$,

folded in four; (*h*) 37 × 27, folded in four; (*j*) 24 × 1, rumpled.

13. Spiral bandage, end tucked in at shoulder; fringes at end, one edge split half-way along, turned down and sewn on to rest, 198 × 2.

14. Scarf over head, ends half-way down sides; end fringe 6 long, other end loose warp 1½ long, 80 × 9½.

15. Left shoulder pads: (*a*) 33 × 8½; (*b*) 15 × 9; (*c*) 29 × 4½; (*d*) 15 × 10; (*e*) 13 × 16.

16. Narrow spiral band beginning at neck, 206 × 1.

Another, round shoulders, 118 × 2.

17. Around feet a strap, with selfedge, two knots and two reverses in length, 477 × 2.

18. Strips round feet, 117 × 1½ and 90 × 2.

19. From ankles upward a spiral strip, crossing over neck, knotted at 196, 470 × 2.

20. Cloth under body turned up to front; fringe one end, turned warp at other. Selfedges both sides, 78 × 40

21. Pad down front, ends and sides hemmed, 53 × 30

22. Spiral strip, ending at feet, crossing at neck; knot at 195, 540 × 2¾.

23. Pads: (*a*) 20 × 12, (*b*) 31 × 9, (*c*) 30 × 8, (*d*) 30 × 6, (*e*) 30 × 10, (*f*) 31 × 9, (*g*) 31 × 7, (*h*) 31 × 9, (*j*) 30 × 6, (*k*) 31 × 6, (*l*) 10 × 30.

24. Cloth under body folded over at sides; fringe 6 inches; other end warp 1½; one selfedge, 77 × 30.

25. Spiral bandage from shins to feet and up; knots at 143, 335, 523 × 2.

26. Cloth under body, split at head, ends folded round front, 86 × 33.

Worn through and patched.

27. Pads: (*a*) 30 × 4 coarse, (*b*) 28 × 16, (*c*) 28 × 15, (*d*) 29 × 9, (*e*) strip of fringe (36 × 2), (*f*) 46 × 9, (*g*) 47 × 11, (*h*) 46 × 15, (*j*) 36 × 11, (*k*) 31 × 14, (*l*) 55 × 10, (*m*) 25 × 11, (*n*) 27 × 10, (*o*) fringe edge 70 × 3½, (*p*) 27 × 15, (*q*) 25 × 14, (*r*) 34 × 13, (*s*) 19 × 17, (*t*) 53 × 7, (*u*) warp end edge 38 × 3, (*v*) 29 × 12, (*w*) 27 × 17, (*x*) 24 × 13, (*y*) 18 × 16, (*z*) 24 × 11, (*aa*) 23 × 6, (*ab*) 24 × 10, (*ac*) 23 × 11, (*ad*) 26 × 20, (*ae*) 35 × 16, (*af*) 22 × 16, (*ag*) 20 × 11, (*ah*) fringe edge 24 × 11, (*aj*) 17 × 8, (*ak*) 22 × 13, (*al*) 23 × 20, (*am*) 31 × 7, (*an*) 14 × 13, (*ao*) 22 × 11, (*ap*) 22 × 11, (*aq*) 14 × 16, (*ar*) 16 × 16, (*as*) 15 × 15, (*at*) 23 × 8, (*ag*) to (*am*) coarse, others ordinary linen.

28. Spiral bandages round toes and upward: (*a*) 123 × 2, (*b*) 69 × 2½, (*c*) reverse at 80, 158 knot, 239 reverse, 319 knot, 510 × 2.

29. Head bandage, 3 turns round, 3 turns round chin, 7 turns round head and neck. At 191 knot, 282 knot, end 320.

30. Pads (*a*) on end of toes, fringe end; 30 × 20, (*b*) similar, 24 × 15.

31. Pads on head (*a*) 53 × 11, (*b*) 17 × 16, (*c*) 17 × 10, (*d*) 36 × 17.

32. Cloth under body turned over at sides, split at head, ends brought round over shoulders, 72 × 30.

33. Pads: (*a*) 14 × 20, (*b*) 21 × 11, (*c*) 27 × 11, (*d*) 16 × 10, (*e*) 18 × 13, (*f*) 23 × 10, (*g*) 17 × 12, (*h*) 22 × 14, (*j*) 31 × 15, (*k*) 32 × 21, (*l*) fringe edge 35 × 5, (*m*) 37 × 11, (*n*) 36 × 15, (*o*) 17 × 19, (*p*) 15 × 15, (*q*) 20 × 17, (*r*) 20 × 15, (*s*) 18 × 20, (*t*) 54 × 20, (*u*) 13 × 17, (*v*) 21 × 17, (*w*) patched, 18 × 16, (*x*) 16 × 17, (*y*) 14 × 22, (*z*) 4 × 29, (*aa*) lump of ravellings, (*ab*) 11 × 20, (*ac*) 4 × 42, (*ad*) 17 × 20.

34. Spiral bandaging over back-board, end in middle, runs down to feet: (*a*) coarse 192 × 3, (*b*) end behind shoulder, knot at 88, end 148.

35. Pads at side of back-board, going down right side and up left side: (*a*) fringe one end 93 × 14, (*b*) 48 × 16, (*c*) 45 × 17, (*d*) 28 × 15, (*e*) 9 × 16, (*f*) 16 × 14, (*g*) 24 × 12, (*h*) 6 × 37, (*j*) 23 × 20, (*k*) 24 × 21, (*l*) two hanks of thrums, (*m*) 13 × 28, (*n*) 20 × 17, all previous coarse. Finer (*o*) 24 × 20, (*p*) 23 × 8, (*q*) 18 × 15, (*r*) six rags, (*s*) 20 × 16, (*t*) 21 × 17, (*u*) 18 × 20, (*v*) 18 × 20.

36. Spiral bandage, chest down to feet, 135 × 2.

37. Y tie bandages; knot under feet, then knot over feet; up the front together; knot on shins; knot on navel; apart over shoulders; knot behind head.

38. From feet vertical up back, then spiral down from shoulders to feet, turning round vertical at each lap, wound round feet, then vertical from feet up, knotted to other vertical behind knees, 40 from neck, and at shoulders, 20 from neck, wound round neck, end knotted on to previous, knot at 191, 375 × 1½

39. Back-board, a piece of old wood. Mortises at both sides, not opposite, 48 × 3 × 1.

40. Head wrap, and tucked in over mouth, 8 turns round, 84 × 3.

41. Pads on head (*a*) 22 × 17; (*b*) 57 × 12.

42. Spiral bandage around feet 6 turns, 158 × 3.

43. Spiral bandage feet to neck, 366 × 2½.

44. Head band, 142 × 1½.

45. Cloth under mummy turned up at sides, folded over and tucked down over shoulders and toes, edges raw, ends both warp ends. 92 × 42.

46. Pads over body: (*a*) 13 × 26, (*b*) 10 × 33

(*c*) 13 × 17, (*d*) 43 × 18, (*e*) 21 × 8, (*f*) 21 × 11, (*g*) 19 × 23, (*h*) 17 × 20, (*j*) 46 × 9, (*k*) 18 × 25, (*l*) 13 × 20, (*m*) 22 × 18, (*n*) 15 × 34, (*o*) 16 × 27, (*p*) lump of ravellings, (*q*) 19 × 38, (*r*) 19 × 38, (*s*) 22 × 21, (*t*) 20 × 15, (*u*) 25 × 3, (*v*) 34 × 15, (*w*) 33 × 17, (*x*) 29 × 18, (*y*) 28 × 19, (*z*) 14 × 36, (*aa*) 24 × 34, (*ab*) 17 × 38, (*ac*) 24 × 18, (*ad*) 44 × 14, (*ae*) 27 × 16; (*af*) water carrier's pad 5 wide, (*ag*) neck bulked out with thrums, (*ah*) 19 × 21, and four or five pads matted together hard. Body also bulked out with ravellings.

47. Three spiral bandages from head to feet, and round head diagonally.

48. Cloth put under whole body, turned up at sides, surplus length turned over toes up to knees. The first cloth upon the hair. Ravellings over face, 86 × 33.

49. Cloth put under body and wrapped over, wide 35.

Pads of ravellings on body.

50. Tie round waist, and spirally down to feet, holding legs together. No wrapping of arms, fingers, legs or toes separately. Hands over pelvis. Ears small, no lower lobe.

37. The other columns in pl. xxi must now be noted. Taking those to the right, of the Roman age from Hawara, the only feature not found in the mummy just described is the long band, B, wound from head to foot, straight down one side and up the other. The rhombic bandaging on 27 was well preserved, having been covered over by the second rhombic bandaging which was added on the re-editing of the mummy. The colours were fresh, and begun with white on the top, then green, white, red, white, white, white, brown, white base; the inner layers could not be distinguished apart. The mummy 49 was much solidified with hard oil and resin, and the innermost layers could not be separated. It should be stated that in the five columns to the right the actual number of turns of the long spirals were noted; in the four columns to the left the length of the bandages was noted, and the turns reckoned by the circumference of the mummy; the exact number is not fixed, but as the numbers where counted show no regularity it is not likely that the number was observed.

To the left are stated the wrappings of three other mummies unrolled by Miss M. A. Murray. The first two are published by her in *The Tomb of Two Brothers*; of the later one at Hastings she has kindly allowed me the use of her notes. The two of the xiith dynasty are mainly consistent with the later system, as will be seen by the resemblances of the letters and numbers. The principal difference is in the form and frequency of Y ties; these are, in this earlier stage, X ties, passing from right shoulder to left ankle, and across that; the subsequent binding of these together in front made the Y form, which was later applied as a single band, split at each end to tie round neck and feet. The long bands, straight down sides and round head and feet, were also frequent. The limbs were each separately wrapped in cloths which partly covered the trunk. The later mummy of the xxvith dynasty has no Y bandage recorded; but as many of the bands were rotted and broken, it may have been overlooked. Now that the regular system is before us—for the first time—it will be possible to record the wrappings with more certainty and discrimination in future.

38. When unwrapping the gilt-head mummy, which has just been fully described, samples of nearly all the linen cloths were set aside, and subsequently their gauges were measured; these are stated as threads per inch of warp and woof in the table on pl. xxiii, with the reference to the number of the cloth in the account already given, sect. 36. A peculiarity in many of the cloths is the use of doubled thread, to save labour in the weaving; more than half have doubled thread in the woof, and a quarter have it in the warp. It would halve the labour in the woof, but only save a little trouble in setting up the warp. These doubled threads are counted as one, and marked D; but in each such case the number may be doubled to reach the thread number, instead of the throw number. It will be seen that roughly the actual thread number is about equal in the warp and the doubled woof, except in the coarser counts. We may here note the gauge of two strips of xiith dynasty cloth found re-used in Roman mummies, pl. xiii 2, 3. These are of 83 warp threads and 23 woof threads to the inch, very regularly laid and closer than the late fabrics. This is a good sample, but 3 out of 42 cloths of Nekht-ankh exceeded this in fineness, being 112, 126, and 151 threads per inch.

It seems obvious that several of these cloths are from the same piece. The fluctuations of weaving and of stretching will easily make a twentieth, or even a tenth, difference in the numbers, especially in the woof. Such gauges as 36 × 19D and 36 × 16D, 36 × 28 and 34 × 28, 29 × 16D and 28 × 16D, 28 × 15 and 28 × 15, 24D × 15D and 24D × 14D are pretty certainly from the same pieces of stuff.

39. Though the cemetery produced no examples of burial in ordinary dress—probably owing to its not being used by Christians—yet one little child was in the clothes which it wore during life. Outside was a long thick shroud. Then followed 8 turns of coarse bandage from head to ankles, which retained a yellow wool dress with two bands of purple figures, tucked in over head and feet. Below was a Y tie over the shoulders, and 3 turns round the body. Next a thick coarse cloth turned up over feet to waist. Then a child's dress laid on the front, having two bands of purple and red flowers. Within was a wrap, and bits of a coloured dress with all the wool eaten out by moth before burial. On the body was a plain dress of fine linen. The persistence of the Y band, where all else of the bandaging system was changed, shows the importance attached to it. (Bristol.)

40. Two instances of dissevered bodies were found, though such are very unusual in late times. A woman's mummy, along with portrait mummy 46, had rhombic bandage, 5 layers: pink feet with black straps and gold studs, serpent armlets, Isis Horus and Nebhat triad on neck, a purple robe, and long curl of hair. Inside the wrapping, the jaw was among the ribs, all bones of right arm in the pelvis, and the vertebrae all separate. Above portrait 1, with three inches of sand between, lay a woman's mummy wrapped in plain cloths; within, it had the humeri out of the scapulae, proximal ends together lying one across and one down, scapula and ribs between them, loose vertebrae, pelvis dissevered, and leg bones all parallel close together. Evidently it had been wrapped as entirely separate bones. Is it likely that any accident in macerating the body—which had to be delivered up after a recognised period—could possibly have removed all the ligaments of the spine and have left the vertebrae apart? Such seems impossible, and if so we must grant that these were intentionally dismembered in some manner. Being women it can hardly be supposed that they had been lost in the desert and eaten by animals; even in such a case the spine of a carcase holds together.

## CHAPTER VI

### THE GROUPS OF TOMBS.

41. APART from the subject of the portrait mummies we also cleared and fully examined various groups of tombs which contained plain mummies. Neither coloured cartonnage, nor gilt stucco, nor portraits, were found below any of the ostentatious stone or brick buildings on the surface, except in one case (Nos. 2, 3, 4); and hence all these forms of decoration were probably kept in the house until abandoned by the family.

The most interesting group was that shown in photographs pl. xvii, and the top plan, 1, on pl. xxii. The north-west chamber had originally been in one with the south-west. A cenotaph was built against the north wall, with a recess in it for offerings, and the group painted with basket-stands of flowers; this is seen on the right of the top view, xvii, 1, looking at east end of it; in front view of the south face across the chamber, in the mid view, 2; and closer in the view 3. There was nothing left in the recess; in 1888 I found a glass cup in such a recess (*Hawara*, xvii, 3). In the middle of the chamber were built two detached pyramids on square dados. The more perfect one is shown in elevation above the plan, with the continuation of the sides dotted up to a point. The clearest view is of the southern pyramid in view xvii, 2, and they can both be seen in view 1. The sizes of these pyramids at the foot of the slope were, northern, 30·6 inches on west; southern, 32·9 on north, 34·7 on west. The angles were, northern 67° north, $67\frac{1}{2}$° south; southern $66\frac{1}{2}$° east, $68\frac{1}{2}$° west, $70\frac{1}{2}$° south; there was thus no accuracy about them, and they were only made of mud brick plastered. After these pyramids were built over the mummies, the northern part of the chamber was bricked across with a very thick wall, without any opening. This wall encased one side of the southern pyramid, and ran above a portrait mummy 40, vi. This is one of the few instances of a portrait mummy inside a chamber or open court, and there was no monument over it or over the three other bodies. In the north-west corner under the cenotaph were two bodies, the lower one that of Herōn, whose inscription is on pl. x, 3.

42. The other burials on the eastern side of plan 1 had but slight wrapping bound with coarse tapes of a brick-red colour, or none.

A small well-finished chamber is that marked 2, and shown in photograph, xviii, 5. The pits of burial were very small, and the paving projected over them; the southern pit had the base course of a stone cenotaph. In the north-east corner were set in the ground a small, flat, ribbed jar, a cup with six waves in the outline, and a smaller saucer, apparently for offerings.

A large enclosure is shown in plan xxii, 3, the view from the east being on pl. xviii, 4; the view of

the north-east enclosure of graves is in pl. xviii, 6. These graves were of brickwork, which in most cases had been plastered over. No decoration of any kind was found on the mummies, which were plainly wrapped. The direction is twice as usual with head to north as it is to the other points, which are about equal. The shaded block south of the south wall is of masonry.

## CHAPTER VII

### OBJECTS FOUND IN THE CEMETERY.

43. BESIDES the portraits and the mummies, many other objects were found in the cemetery, though these were not quite so important as those found in 1888; the earlier excavations were much in chambers above the actual graves, while the later were more in the graves. We here follow the order of the plates.

Pl. xiv. To the north-east of the pyramid a burial of a girl lay with the head to the east. The mummy was in rhombic bandaging with gilt buttons, a gilt face and yellow-painted bust, and a foot-case. Over this mummy lay a cloth, and on the cloth lay the toys of the girl. At the head was a wooden tablet with tenon handle at one edge, 3·46 inches wide at top, 3·42 at base, the sides 5·41 and 5·43 long. (If this be made by measure it would, if 3·45 and 5·41, be 7 and 11 units of a sixth of the palm of a cubit of 20·67 inches). On one side of the tablet is a painting of a woman seated with legs apart; on the other is a draped man on a chair with high back, holding a pair of shears, and with a cupboard in the wall behind him, apparently containing rows of rolls. This suggests a tailor of literary tastes. Above this lay a small wooden box without the lid. The box measured 3·26 and 3·24 by 2·13 and 2·10. Two glass bottles lay on the head, two long-necked on the chest, and a small one (second in the row) with the cut-glass bottle upon the thigh. The cut-glass bottle of globular form is shown in the middle of the group; it is finely worked with a wreath round the neck, another on the shoulder, fluting down the sides, and a cruciform flower on the base shown separately in front of the lion. The lid of the wooden box lay on the neck; the limestone lion on the waist (4·5 long); the blue-glazed Horus on the knees; with a little ivory box without a lid by the lion. The rarest objects here were two mirrors, made of tinned copper, fitting in wooden cases with lids. The one on the neck was convex, case 2·70 across; that below the lion was concave, case 2·45 across. This whole group is in the Royal Scottish Museum, Edinburgh.

44. Pl. xv. At the north limit of this year's work a jar was found in a surface chamber. In the chamber were lying: 1, a glass ball; 3, a copper coin of Theodosius; 2, 4, 5, three pottery lamps; and 6, 7, two fine altars of pottery. The lamps might be put to the 1st or 2nd century, and the coin of Theodosius seems as if dropped there later. In the jar, and therefore certainly of one age, were 8, a lead dipper with long bronze handle; 9, 10, two very thin glass cups; 11, an iron knife; 12–15, pottery lamps.

To the north-east of the pyramid, a group of coloured pottery figures was found in a surface chamber. The mask 16 and bull 17 were only white and black; but the three different figures of Horus, 18, 19, 20, were fully coloured, as also the Atys 21, and bouquet wand 22. The limbs of the Atys and the bouquet are of plaster. (Munich.)

45. Pl. xvi. Another group found near this is shown in figs. 1–9. Three examples were found in different places of a stick with a lump of rag tied on the end, and stiff as if glued together, fig. 1. This may be ceremonial, or merely a washing-mop, hardly for whitewashing, as there is no colouring material. Figs. 2, 3 are little baskets of cast lead, with cast-lead handles fitted in. 4 is a rod of glass twisted with white thread in it. 5 is a curious glass bottle with long neck and bilobed body. 6 is a string sandal. 7 and 8 are pottery hutches in which to burn a minute lamp, so as to screen it from wind. Fig. 9 is a pottery stand. (Univ. Coll.)

Fig. 10 is a large lamp handle of moulded pottery. It represents Dionysos, and perhaps Thanatos drawing him away, and holding a reversed torch which balances with the thyrsos of Dionysos. The emblems of the god are all around, the mask, cymbals, leopard, pan-pipes, lituus and cantharos. (Manchester.) Fig. 11 is a pottery Horus, in an Indian attitude, with a basket at the side surmounted by another figure of Horus.

Fig. 12 is half of a sundial of limestone; the drawing of the upper surface is given in pl. xxiii. It was a concave dial, approximately spherical, and had a short gnomon 2·42 inches long, placed parallel to the upper slope, from the apex at the left hand; the mortise hole for fixing a stem from the gnomon is visible there. The stone had been much weathered after being separated from the other half, as is seen on the joint surface facing in the photograph. The

curved lines running through the six hours are so placed that the shadow of a gnomon whose tip reached the mid line at the equinox would fall on the outer line at the winter solstice. The inner curve however, would agree with it on February 13 and October 30, and if intended for the summer solstice it would be in error. As the dial stands in the photograph, the south is to the left edge of the page, the right-hand edge is vertical, and the upper slope points to the pole at an angle of $31\frac{1}{2}°$, the latitude of Alexandria being 31° 12′. The errors of the hour lines are not more than would be expected in work of this time. On the top sloping face are two lines drawn near the edge. One is parallel to the edge, and therefore the true north line. The other meets it at an angle of 4° 48′ ± 5′, and seems as if intended to be used for setting the dial true by pointing it to a pole-star at greatest elongation west. The only star which this could agree with in Roman times is 5 or a *Ursae minoris*, which, though of fourth magnitude, would be easily found by being in line with the two front stars of the Bear. This star was nearest to the pole at 530 B.C., being then $4\frac{1}{2}°$ distant, and by 100 A.D. it was 5° 19′ distant. But as the observation was probably not exact to more than half a degree, and very likely a distance observed in Greek times was carried on into Roman usage, no exactitude is to be looked for in the precise amount. Enough to say that a line on a polar plane, which is 4° 48′ askew, would serve fairly in Roman times to adjust a dial at the greatest elongation of the pole star, which is the only position for accurate observation without elaborate instruments. I am indebted to Mr. E. B. Knobel and the Rev. F. A. Jones for notes on this star.

Figs. 13, 14 are two of a group of baskets found stacked together in a large jar; this stood in a chamber north-east of the pyramid, near the mummies 17–19. The baskets were tender when found, but by dipping them in hot rice-water they have been put in safe condition. Probably they were left behind after holding a funeral feast in the cemetery. Pls. xvii and xviii are described in the previous chapter.

46. Pl. xix. The limestone figure, 1, should rather be in the second volume, *The Labyrinth*, as the copy of inscription and translation is given there. It is of an official of the xixth dynasty, before the age dealt with here. (Manchester.)

The bulls' skulls, 2, 3, were found in a group of bones of four oxen lying all together buried in the corner of a chamber at the feet of portrait mummy No. 1. Three of them had wide horns, and one had lyre horns. When found they appeared as if they must have been a funeral sacrifice of Roman age; as work went on, no such sacrifices appeared connected with other late burials; and after some exposure there was seen the mouth of a square shaft below them. They are probably therefore offerings piled over a pit tomb of the xiith dynasty; and a Roman tomb chamber has been built above them, and burials placed beside them. (Nat. Hist. Mus., S. Kensington.)

Two small limestone altars were found in the cemetery. One partly broken had figures of offerers on the end, 4; and a *ba* bird by a sycomore tree, 5, at one side of the spout. The inscriptions are illegible. A larger altar had groups of offerings on the top, 6; and figures making offerings to Osiris, Isis, and Nebhat, 7, on the side. (Ny Carlsberg.)

47. Pl, xx. A limestone head, about two-thirds of life size, was found in a chamber, to the north-east of the pyramid. This is just where in 1888 I recorded on the plan (*Hawara*, xxv) that there was a Roman statue, which was headless. Unhappily the statue has disappeared before the head was found to render it of value. The work of this, though mechanical, has kept to fairly good Greek traditions. The eyes have been of black and white glass, as on mummy cases; the black centres are now lost, and only indicated by the flat circle on the white. The nose and upper lip had been anciently broken off, and then remodelled in plaster, which is of rare occurrence. (Ny Carlsberg.)

The tomb steles 2 to 8 are of usual types, and I am indebted to Prof. Ernest Gardner for reading some of them.

2. The figures are of Akhilion and his wife adoring the hawk-headed Ra, and a figure with the crown of Lower Egypt, which might be Neit or a king. "To Ra-Moeris the twice great God, by Akhilion son of Akousilos, for himself and his wife and his children. Year 10, Thoth 8." (Cambridge.)

3. Though much is lost this is seen to record the death of a lady at the age of 50 with her twin children, "farewell to both of them, farewell also to thee." There is nothing to show that she died at the same time as the twins; it might be put up by a widower on his wife's death, commemorating their children who died before. (Cambridge.)

4. "Soukhas, Nomographos, lived 64 years, griefless. The son Soukhas (lived) 35 years." (Nottingham.) It is possible that this is the S . . . . s

nomographos in the Fayum who is named in a papyrus of 158 A.D. (Grenfell and Hunt, *Fayum Towns*, pp. 131–2.) (Nottingham.)

5. This has, at the end, part of an hexameter and a pentameter, and appears to read "gave thee burial in consecrated earth because of thy goodness. Year 10 K(laudios) Kais(ar) Tybi 18." This is the very rare instance of a tombstone dated by a reign, and is of much interest for dating such inscriptions. (Univ. Coll. Lond.)

6. This fragment is very roughly cut, and so little remains that it is impossible to glean the sense. It appears to name the grave of a woman, also "cheek" and "neck," but that the words were the ends of hexameters is about all that is clear.

7. "Kephalion son of Leonidas lived 48 years, ever to be remembered." (Nottingham.)

8. "Menandros son of Diodoros, Herald, lived griefless 77 years."

Pl. xxi has been described in sects. 33, 36, pl. xxii in sect. 41, and pl. xxiii in sects. 7, 8.

48. Pl. xxiv. The inscriptions 1 and 2 are photographed on pl. xiii, 2, 3. They are on narrow strips of linen used for mummy bandages (described in sect. 38), in about the xiith dynasty; these had been re-used in Roman times. The inscriptions are exactly of the type of those on the cloth of Khnumu-Nekht (*Tomb of Two Brothers*, p. 64), though longer; and those were certainly of the xiith dynasty. No. 1 reads "*Neferui*" (twice good cloth) the keeper of the palace gate Un-nofer son of Sebek-hotep the elder, life health and strength (to him)." No. 2 reads "*Neferui*, year 15 *sa* cloth . . . . new year festival day 4."

The demotic inscriptions are on the Roman mummies, and I am indebted to Sir Herbert Thompson for the translations. No. 3 is along a plain cloth cover (see sect. 33), and No. 4 is across the ankles of the same mummy. The place of other mummy inscriptions is on the ankles, so probably 4 is the original name "P.rem.iom son of Huy, Hawara." The inscription 3, which is probably below, may be that of the owner of the mummy, the widow, "Arsinoe (daughter of) Herakleitos, the woman of Hawara." No. 5 was on the feet of a mummy on which caricatures had been drawn (xiii, 1); "Ypy the man of the Fayum son of Huy." The title "the man of the Fayum" might be a second name, as it is used for a name—P.rem.iom—in No. 4. No. 6 was on a red cloth cover of a mummy across the ankles, 'Pilto (?) the man of the Fayum son of Huy, Hawara." Seeing that the square *p* alone is used for *phi* in the cartouche of Philip, this name,—literally Pyltwe (?),—suggests the Greek Philteas or Philtias.

Some facts should be noted in passing. All of these demotic inscriptions are of one family, three sons of Huy; the men are all called "man of the Fayum"; and in three cases, 3, 4 and 6, they are said to live at Het-ta-ur, translated Hawara. As, however, there are in Egypt many places named Hawara, or Howareh, from settlements of that great Arab tribe, the connection of the ancient and modern names is questionable. The inscription 7 is on a jar, and might perhaps be read by the aid of parallels.

No. 8 is incised on a jar of the form shown. Prof. Ernest Gardner reads it as "Kolophonian resin, the pot weight 150 drachmae."

Nos. 9, 10 are roughly incised Coptic names on dishes, "Sampa," and "Poun . . . ."

No. 11 is scrawled on a pot with charcoal, outside and inside. Both appear to be the common Greek name, Euboulos.

No. 12 is a fragment neatly written in a later hand, "Ecclesias."

No. 13 is rudely incised, and only two fragments of the lines remain. In the second it is tempting to see a rendering of a Semitic name, Abd-es-Samim, "servant of the heavens," *Samim* being translated into Latin as *ioviōm*. Nos. 14 and 15 are Coptic names on bowls.

No. 16 is a wooden label written with ink, of Diodoros (?) of Arsinoe, who was an official of the market of the cloak-sellers. The remaining fragments 17 to 23 are of marble slabs from graves, of which not enough remain for a certain reading.

Pl. xxv. The pottery is all of Roman age; those of the same group are marked with the same number, not referring to other objects.

Pl. xxvi has been fully described in the first two chapters.

49. Mr. J. G. Milne has kindly examined all the fragments of papyri found in the course of the work. Most of them are so small that even the subjects cannot be traced. Those worth noting are stated below. A letter is used for each group of fragments, and numbers for the separate pieces of a group Measures are in millimetres. All the centuries are A.D.

A. 60 × 94. Ten lines practically complete. An acknowledgment of the return of tools (?) lent "in the thirteenth year now past." 1st cent.

B. 90 × 87. *Recto.* Beginnings of 6 lines, apparently accounts. *Verso.* Middles of 7 lines, list of names with descriptions of house property. 1st cent.

C. 101 × 94. Middle of 13 lines from bottom of a document. Details as to transferred properties, with references to the records of the 11th year of Hadrian, 127 A.D. This was folded up and placed on the portrait 18, vii A, tucked beneath the bands.

D. 108 × 65, and 50 × 51. Two fragments with beginnings of 10 and 3 lines, apparently a letter. 1st or 2nd century.

E. 97 × 108. Three connected fragments, with parts of 8 lines, the whole extent of an order to Herakleides the banker to pay a sum of money. Dated in the reign of Domitian.

J (1). 135 × 142. Parts of 18 lines from the top of document. Census return of 105 A.D. in the district of Dionysias.

K (1). 140 × 42. Parts of 11 lines, list dated in reign of Hadrian.

(3). 152 × 115. Parts of 21 lines, whole extent of agreement relating to leased land in a village of the division of Herakleides, one party registered in the Hermouthiac district. Dated in the 8th year of Hadrian.

L (2). 120 × 75. Ends of 9 lines from bottom. Letter, dated 27 Pakhons year 6 (?) of Tiberius or Claudius.

N (2). 140 × 115. Two fragments. *Verso.* Parts of 17 lines, apparently accounts with reference to a date in the reign of Claudius.

O (2). 140 × 105. Parts of 12 lines. Elegiac poem referring to Merops. 2nd century.

## CHAPTER VIII

### MEMPHIS.

50. THE excavations at Memphis this year were on three plots of ground. One plot, No. 45, of a third of an acre, near the colossus, contained the hind quarters of a colossal sphinx, the remainder of which ran on into a different property and has not yet been cleared; some large blocks of limestone, and a headless statue of a vizier were also found here. Another plot, No. 17, of about an acre, in the Ptah temenos, east of Mitraheneh, was cleared in alternate blocks, descending to over twenty-five feet in very tough black mud, but no sculptures were found in the parts cleared, and the intermediate blocks were therefore not moved. A third plot, No. 54, south-west of the Siamen building (see *Memphis*, I, pl. i) was excavated as the owner had been finding stone in it. About half an acre was turned over, beside a trench in the rest of the ground. The foundations of a church were cleared, which proved to be formed of blocks from the Ramesside temple of Ptah. All the sculptures were copied, and many removed. These will be best described by following the order of the plates.

51. Pl. xxvii. This is part of a large scene of the king offering to Ptah in his shrine. It has been reconstituted from five blocks, the connections of which are only inferred. The god promises the king to "give to thee to make multitudes of festivals eternally." The largest block, with the figure of Ptah, has originally belonged to an earlier temple, probably of the xiith dynasty, as it has a *Khaker* ornament along the present base of it.

Pl. xxviii. It is not known whether the two large blocks at the top of this plate are from the same wall. That the top band of signs is nearly of the same height, and the signs read the same way, points to their being originally connected. It is probable that when collecting building material from the ruined temple, neighbouring parts would be taken together.

The left-hand block has the usual titles of Ramessu II, and part of a hand showing where the figure of the king had been below. Another block with the figure on it may probably belong here, as shown in the plate. (Hibbard Mus., Chicago.) An unusual column of text in front begins with an address to the king by the sixth hour of the night; the hours are not known to be personified like this elsewhere. On the right hand of the plate the top line refers to "the stars the fixed ones." Below are two apparently Libyan figures, who seem to be spirits which are called on to "give all power from Arren" and "give all stability from Ha." These names are perhaps unknown so far, as they do not appear in Lanzone. (Cambridge.)

Below in the plate are a part of a stand of offerings and two pieces of a scene of Khentamenti and a goddess in a celestial boat amid the stars, with two sons of Horus before it, and two similar figures which probably followed it.

Pl. xxix. The sculptures here hardly need any notes; the present places of those brought away are as follows: the two groups of offerings to Cambridge and Carlsberg; the figure offering incense and the block naming the *menat* and sistrum, also to Carlsberg.

Pl. xxx. The top block on the right has

apparently the lower parts of the heads of Hathor on poles; the section showing the depth of relief is given below them. Below that is the curious palimpsest slab; the first inscription was *apt asut Hor*; the second *ne nati se ankh*; the third is *ma tej Ptah.* From the style it seems that the first is of the xviiith dynasty, the second of the xixth, and the third may be a re-use by Ramessu III or IV, judging by the coarseness and depth of the cutting. (Manchester.) The two figures of Taurt on the slab below are unusual. At the base is part of a door jamb from the tomb of the "scribe of the treasury of the lord of both lands, Hora." The name and office are both so usual about the xixth dynasty that the person cannot be identified; he might well be Hora with the same title in a Turin papyrus under Ramessu II.

52. Pl. xxxi. At the top is a group of gold work which was found together, close to the north side of the great dividing wall of the town, which continues from the south face of the great temenos. This group was about half-way from the temenos to the east side, and below the level of the base of the great wall. In the photograph the two large masses are of very thin gold, filled up by a light porous plaster body. The circles and connecting lines near the ends are a degraded copy of Mykenaean long scroll pattern. The gold earrings are of forms which were used from 1200 B.C. onward. Probably the whole group is of about 700 B.C. (Univ. Coll.)

Below is a group found to the north-east of the previous, not far from the east edge of the mounds. The date is about 550 B.C. by the punched Greek coins which were strung with it. The open-work silver beads at the top are like those of the xixth dynasty, but simpler. The two gold earrings are rather later in style than those above. The second line is of heavy silver beads, multiple globules, or hexagonal. The third and fourth line are of agate of poor and late forms, together with the two coins with square incuse reverses bearing traces of a type. The middle figure is a silver one of Nefer-atmu.

At the base is a small limestone stele of Apis. The sacred bull, apparently mummified and couchant, is in his shrine, of which the front and side are shown. It is of open-work joinery of wood, with a cornice of uraei. The shrine is in a sacred bark placed upon wheels, showing that this processional bark was drawn about in the ceremonies. (Cambridge.) A well-preserved stele with the same subject is published in the *Monumens Divers.*

At the left side are a limestone capital and band of foliage, from the church south of the Ptah temenos. These are the only remains of the building and date it to about 520 A.D. on comparison with the work of Theodoric, and the capitals of Mercurius at S. Clemente. The foundations of this church were formed of blocks from the temple of Ptah, which are published in pls. xxvii to xxx.

# INDEX

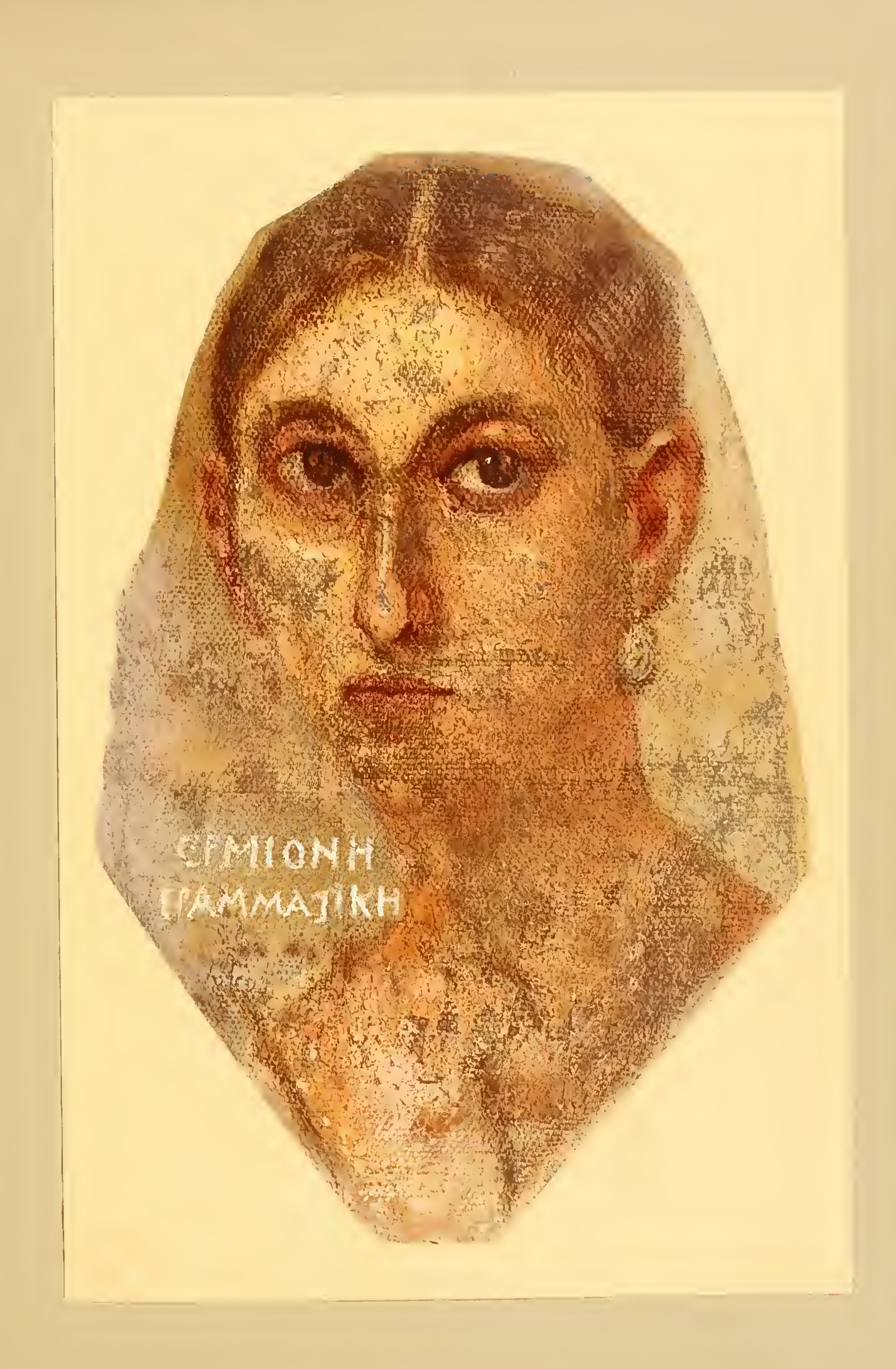
*Printed by Hazell, Watson & Viney, Ld., London and Aylesbury.*

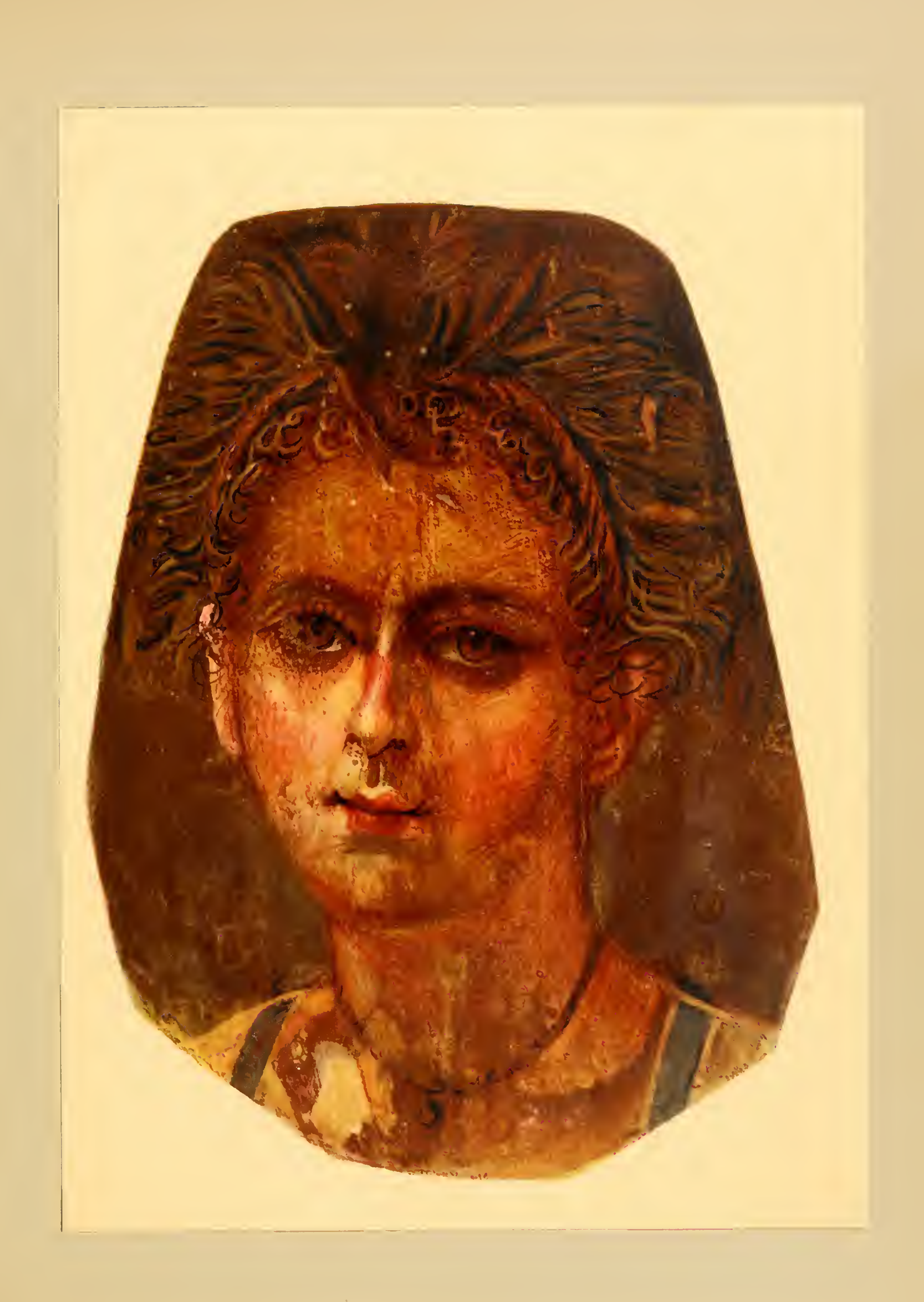
# WORKS BY W. M. FLINDERS PETRIE

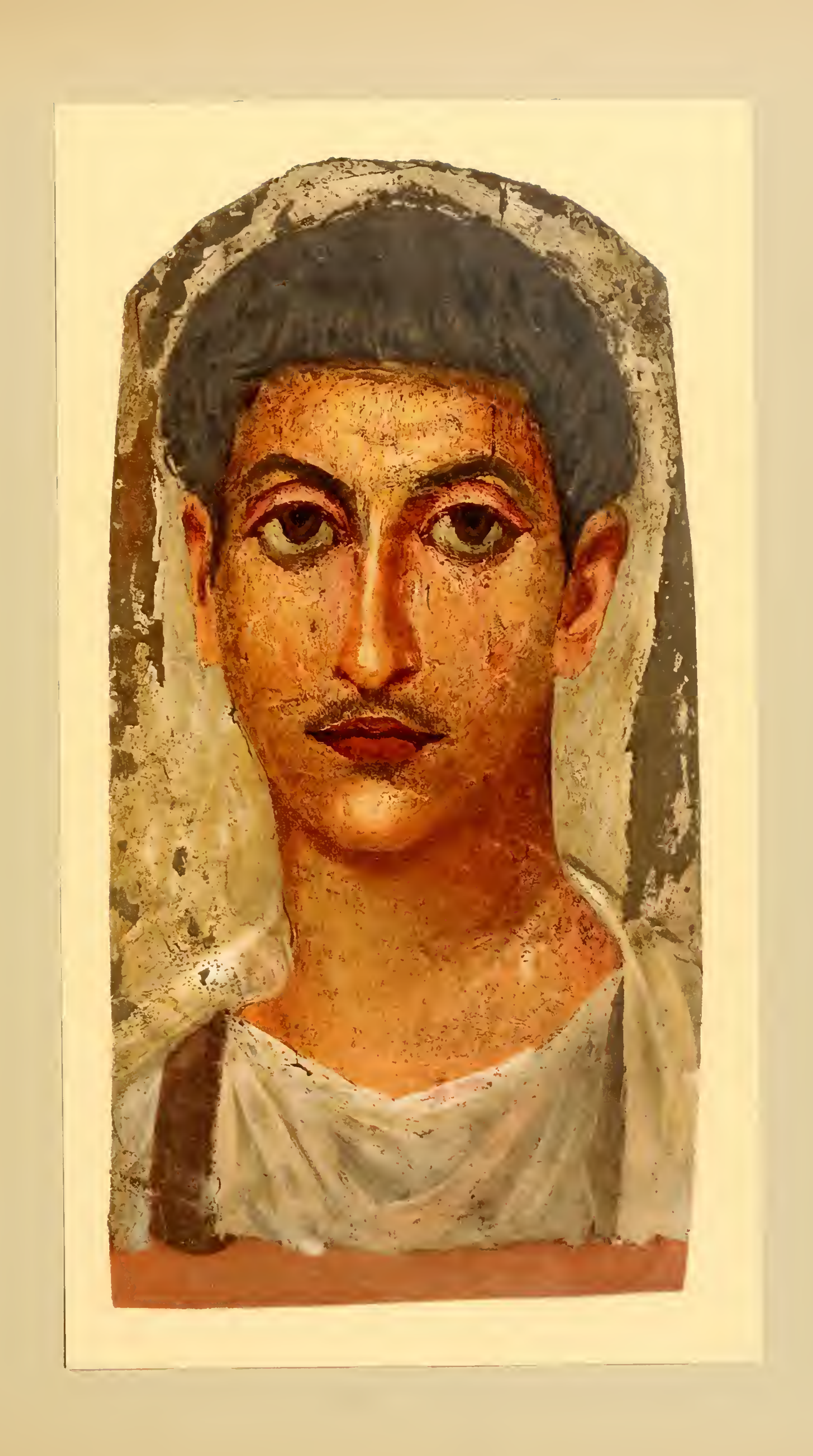
---

THE PYRAMIDS AND TEMPLES OF GIZEH. (Out of print.)*
TANIS I. 19 pl., 25*s.* *Quaritch.*
TANIS II. Nebesheh and Defenneh. 64 pl., 25*s.* *Quaritch.*
NAUKRATIS I. 45 pl., 25*s.* *Quaritch.*
HIEROGLYPHIC PAPYRUS FROM TANIS. (Out of print.)
A SEASON IN EGYPT, 1887. 32 pl. (Out of print.)
RACIAL PORTRAITS. 190 photographs from Egyptian Monuments. (To be printed, 1911.)
HISTORICAL SCARABS. (Out of print.)
HAWARA, BIAHMU, AND ARSINOE. (Out of print.)
KAHUN, GUROB, AND HAWARA. (Out of print.)*
ILLAHUN, KAHUN, AND GUROB. 33 pl., 16*s.* (Out of print.)*
TELL EL HESY (LACHISH). 10 pl., 10*s.* 6*d.* *Alexander Watt.*
MEDUM. 36 pl. (Out of print.)
TEN YEARS' DIGGING IN EGYPT, 1881-1891. 6*s.* *R.T.S.*
TELL EL AMARNA. (Out of print.)*
KOPTOS. 28 pl., 10*s.* *Quaritch.*
A STUDENT'S HISTORY OF EGYPT. Part I., down to the XVIth Dynasty. 5th ed. 1903. Part II., XVIIth and XVIIIth Dynasties. Part III., XIXth to XXXth Dynasties. 6*s.* each. *Methuen.*
TRANSLATIONS OF EGYPTIAN TALES. With illustrations by Tristram Ellis. 2 vols., 3*s.* 6*d.* each. *Methuen.*
DECORATIVE ART IN EGYPT. 3*s.* 6*d.* *Methuen.*
NAQADA AND BALLAS. 86 pl., 25*s.* *Quaritch.*
SIX TEMPLES AT THEBES. 26 pl., 10*s.* *Quaritch.*
DESHASHEH. 37 pl., 25*s.* *Quaritch.*
RELIGION AND CONSCIENCE IN EGYPT. 2*s.* 6*d.* *Methuen.*
SYRIA AND EGYPT. 2*s.* 6*d.* *Methuen.*
DENDEREH. 38 pl., 25*s.*; 40 additional plates, 10*s.* *Quaritch.*
ROYAL TOMBS OF FIRST DYNASTY. 68 pl., 25*s.* *Quaritch.*
DIOSPOLIS PARVA. 48 pl. (Out of print.)*
ROYAL TOMBS OF EARLIEST DYNASTIES. 63 pl., 25*s.*; 35 additional plates, 10*s.* *Quaritch.*
ABYDOS. Part I. 81 pl., 25*s.* *Quaritch.*
ABYDOS. Part II. 64 pl., 25*s.* *Quaritch.*
METHODS AND AIMS IN ARCHAEOLOGY. 66 blocks, 6*s.* *Macmillan.*
EHNASYA. 25*s.* *Quaritch.*
ROMAN EHNASYA. 10*s.* *Quaritch.*
RESEARCHES IN SINAI. 186 illustrations and 4 plans, 21*s.* *John Murray.*
MIGRATIONS. Huxley Lecture, 1906. 11 pl., 2*s.* 6*d.* *Anthropological Institute.*
HYKSOS AND ISRAELITE CITIES. 40 pl., 25*s.* *Quaritch.* (With 48 extra plates, 45*s.*, out of print.)
RELIGION OF ANCIENT EGYPT. 1*s.* *Constable.*
GIZEH AND RIFEH. 40 pl., 25*s.*; with 69 extra plates, 50*s.* *Quaritch.*
ATHRIBIS. 43 pl., 25*s.* *Quaritch.* (Out of print.)
PERSONAL RELIGION IN EGYPT BEFORE CHRISTIANITY. 2*s.* 6*d.*; *in leather*, 3*s.* 6*d.* *Harper.*
MEMPHIS. Part I. 54 pl., 25*s.* *Quaritch.*
QURNEH. 56 pl., 25*s.* *Quaritch.* (Out of print.)
THE PALACE OF APRIES (MEMPHIS II). 35 pl., 25*s.* *Quaritch.*
ARTS AND CRAFTS IN ANCIENT EGYPT. 45 pl., 5*s.* *Foulis.*
THE GROWTH OF THE GOSPELS. 2*s.* 6*d.* *Murray.*
MEYDUM AND MEMPHIS (III). 47 pl., 25*s.* *Quaritch.*
EGYPT AND ISRAEL. 54 figs. 2*s.* 6*d.* *S.P.C.K.*
HISTORICAL STUDIES. 25 pl., 25*s.* *Quaritch.*
MEMPHIS IV (ROMAN PORTRAITS). 35 pl., 25*s.* *Quaritch.*
THE LABYRINTH. (*In preparation.*)
PORTFOLIO OF HAWARA PORTRAITS. 50*s.* (*In preparation.*)

Of works marked * a few copies can be had on application to the Author, University College, London.


ЄΡΜΙΟΝΗ
ΓΡΑΜΜΑΤΙΚΗ





57.

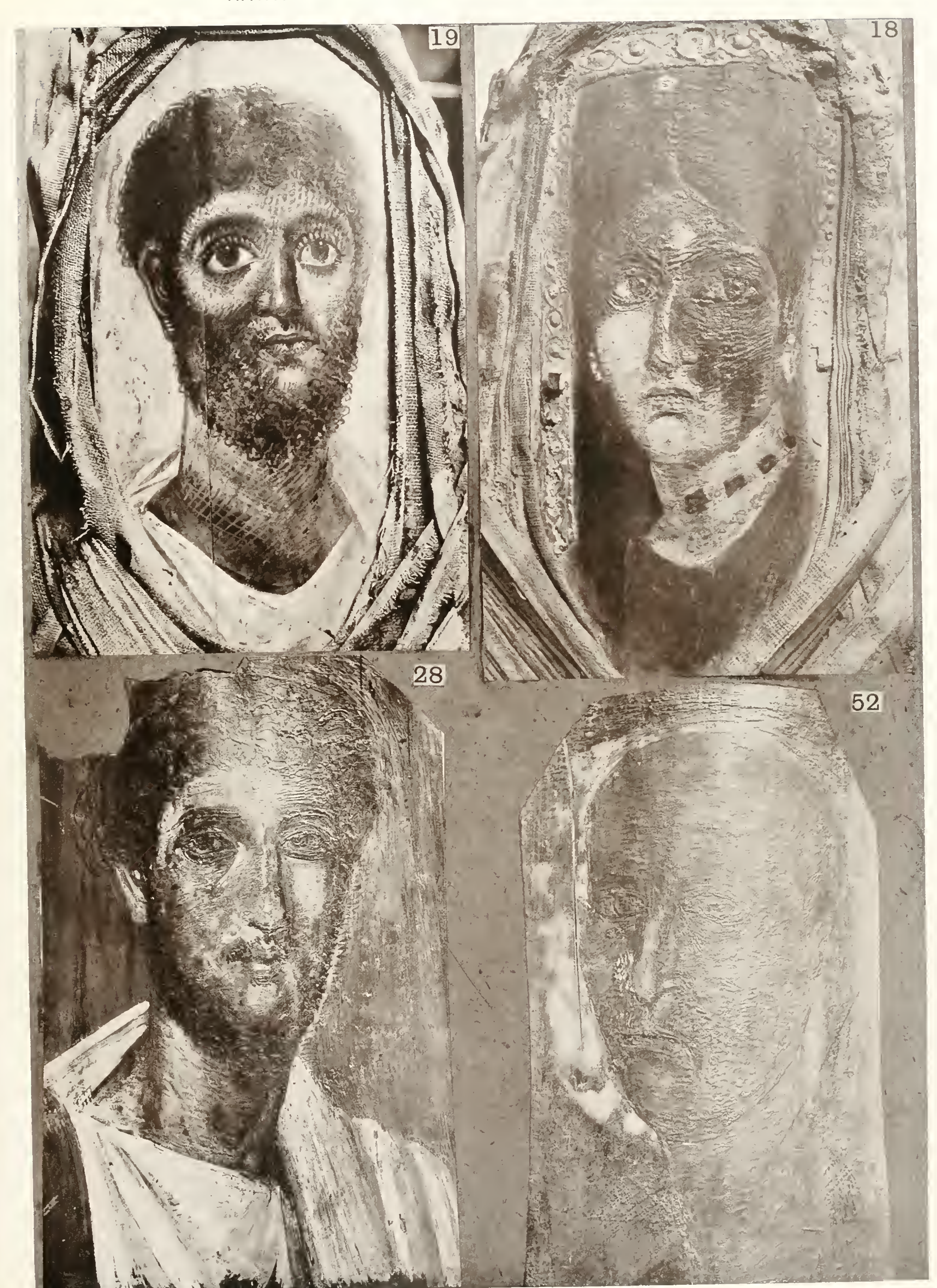

53
59
23
34


46
CAIRO
5
9


40
25
43
42


29
21
30
4


1
27
11
60


19
18
28
52

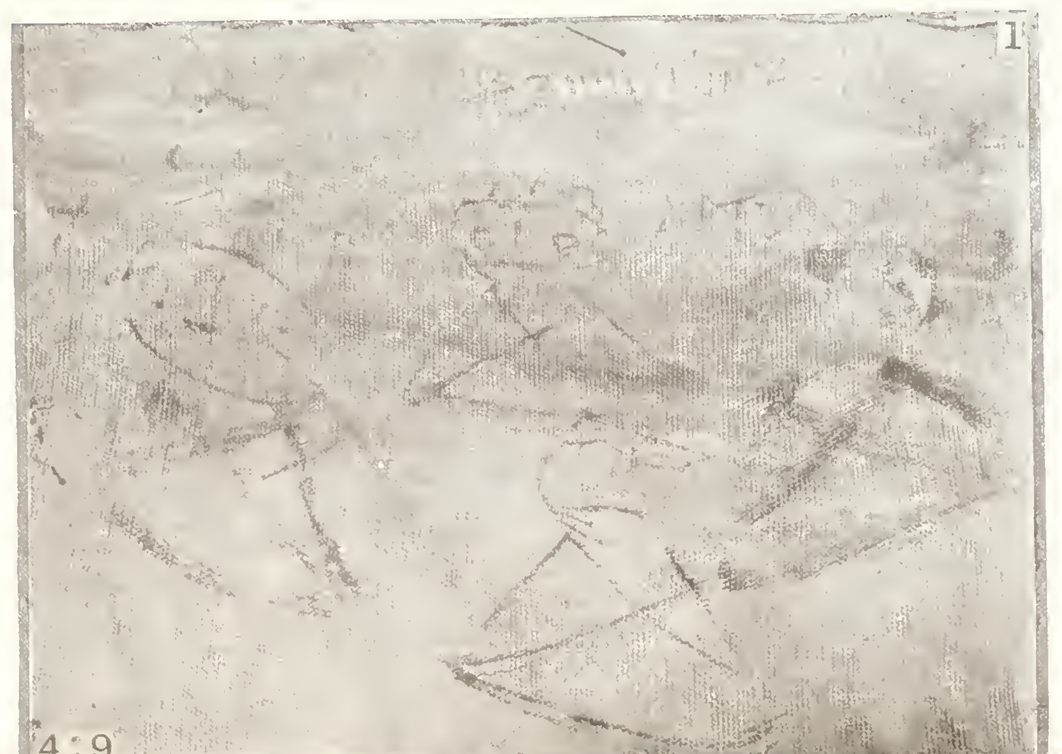

TT
OO
DD
H


N
T
C
WW


1
2
3
4
5
4:7


1
2
3
4
10
3
1
5
6
7


6:5




2 3 4 5

1:1

HAWARA. GROUP OF GIRL WITH TOYS. 






IN ROOM WITH JAR.




INSIDE JAR.

GROUP OF FIGURES.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
1:2
2:3
1:2




TWO PYRAMIDS AND CENOTAPH FROM EAST.




PYRAMID AND CENOTAPH FROM SOUTH.




CENOTAPH FROM SOUTH.




GROUP B FROM EAST.




GROUP C FROM NORTH-EAST.




GROUP D FROM EAST.


1
2
3
4
1:2
5
6
1:3
7


1
3:5
3:10
2
3
4
5
6
7
8

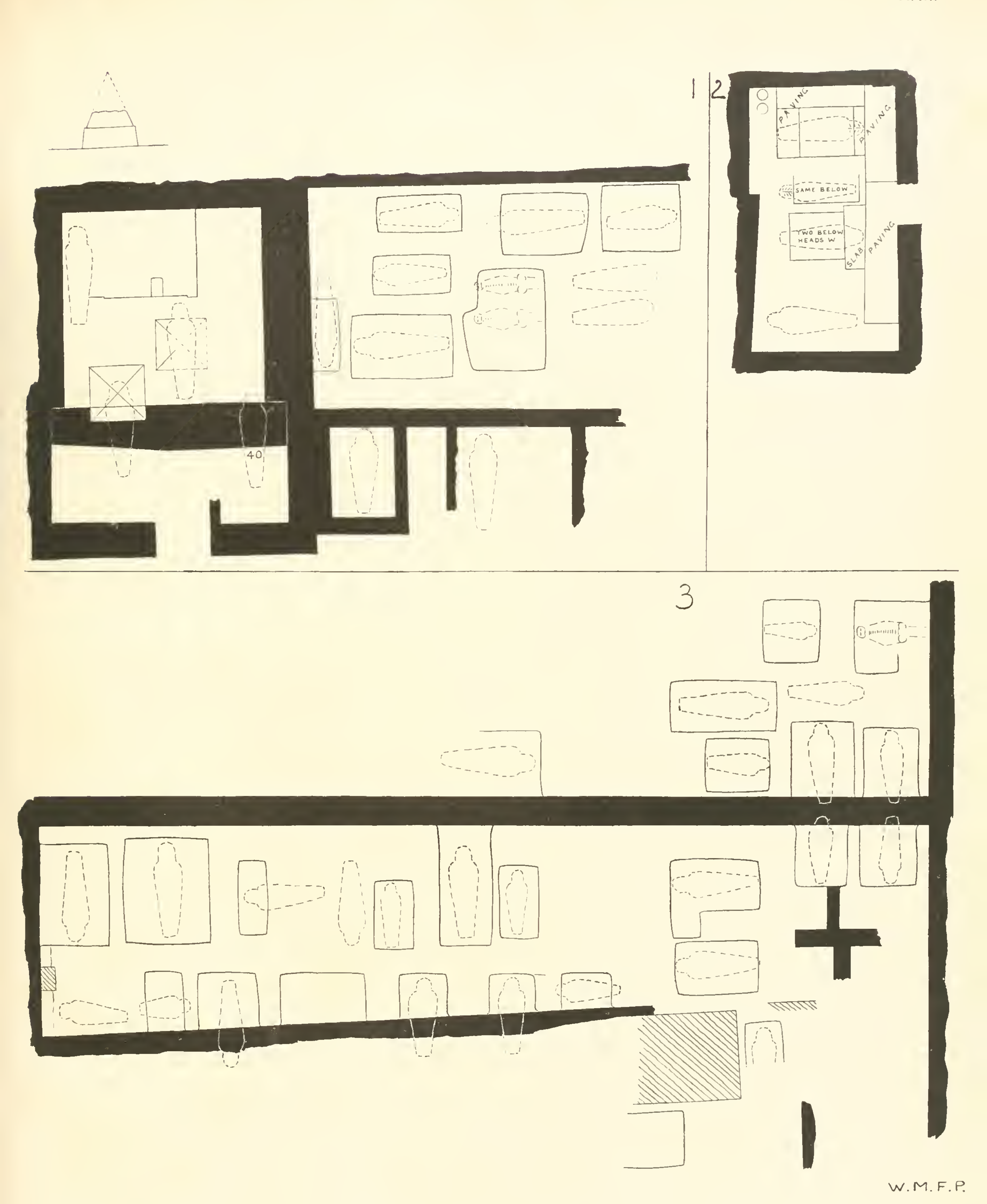
| XII Nekht-ankh Manchester | XII Khnumu-nekht Manchester | XXVI Ta-ȧath Hastings | Gilt head-case woman | Gilt face. man | Demetria woman | Portrait 49 man | Portrait 27 woman | Plain mummy woman |
|---|---|---|---|---|---|---|---|---|
| | | | 7R | 7R | R | 6R | 7R | |
| | | | P | | | | | |
| | | | T | | | | | 15T |
| | | | 2P | | | | | |
| | | | 18T | | | | | 8T |
| | | | 13P | | | | | |
| | | | 6T | | | | | 8T |
| S | S | S | S | S | S | S | S | S |
| | 7T | | | | | | | |
| | 2Y | | 5P | P | | | | |
| 13T | 8T | | 52T | 14T | 36T | 20T | | |
| 2P | 2P | | 3P | 6P | 5P | | | |
| 15T | 2T | | 16T | 10T | 19T | | | |
| | | | 11P | | 5P | 15P | 8P | |
| 2Y | | | C | hd ft B | long B | | | |
| 2B | | | 16T | | | | | |
| | | | C | | | | | |
| | P | | 46P | | | | | |
| 20T | 16T | 35T | 21T | 15T | 49T | 20T | 24T | 18T |
| | | | 13T | | | | | |
| P | P | 8P | 6P | 6P | | 15P | | |
| Y | | | | | | | | |
| 2B | | | | B | long B | | long B | |
| | | S | C | 2C | | C | | S |
| | | | 29P | 8P | | | | |
| 14T | 20T | | 10T | 6T | 22T | 15T | | |
| long 2B | | 7P | 21P | | 9P | P | | 2P |
| Y | Y | | Y | Y | Y | Y | Y | Y |
| 3 long B | 3 long B | 5T | 11T | 14T | 17T | Ts | 18T | |
| 10T | | | | | | | | |
| | | | | 32P | | | | 2P |
| | | | | | C | C | C | C |
| S | | | | | | | | |
| | | | 8T | 18T | | | T | |
| | 3P | 3P | 2P | 6P | 36P | Ps | 6P | 8P |
| | | | | | Y | | | |
| | | | | 9T | | | | |
| | | | | 4P | | | | |
| 26T | 15T | 10T | 22T | 24T | 19T | Ts | Ts | 24T |
| | C | | C | | C | | C | C |
| | P | | 38P | | 80P | | B | C |
| | | | ravells | | | | | |
| | | | 3T | | | | | C |
| | | | C | S | S | | S | C |
| | | | | 7P | | | Ps | 4P |
| | | | | | | | coarse | |
| | | | | 14T | | | B | |
| | C | | C | | | | C | C |
| | | | ravells | | | | | |
| | | | T | 12P | | | P | 7P |
| | | | | | | | coarse | |
| | | | | 9T | | | B | |
| | | | | 4P | | | C | C |
| | | | | | | | C | |
| | | | | | | | C | |
| | | | | | | | ?6 more | |
| Limb bands | Limb bands | | Limbs tied | Limbs in 3 or 4 turns | Body and limbs bare | Solid below | | coloured pattern garment |

2:15

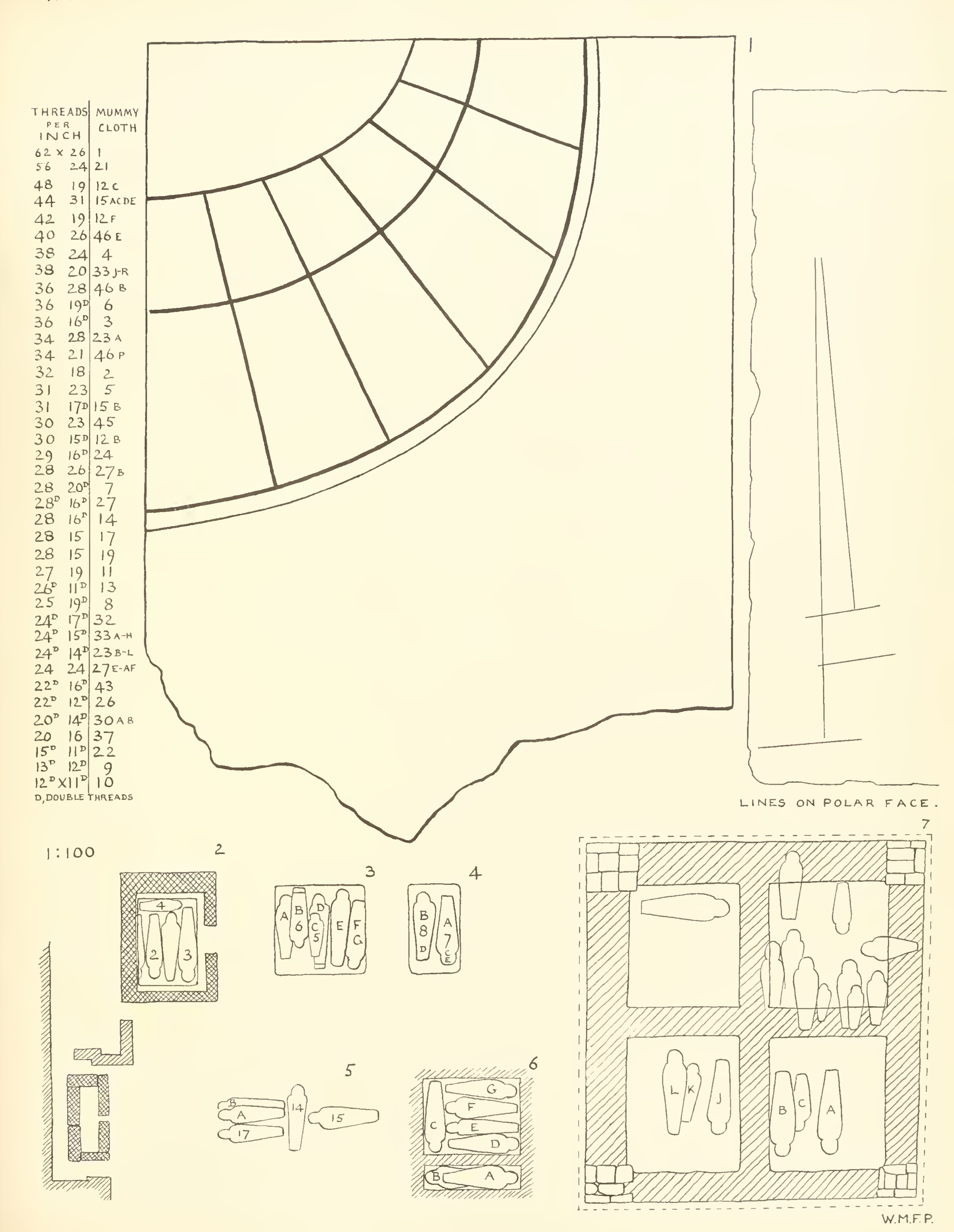
ΔΗΜΗΤΡΙϹ ⲖⲐ

W.M.F.P.

B. bands. C, cloth beneath turned up. P, pads. R, rhomb. S, shroud tucked in. T, turns. Y, forked tie


1
2
PAVING
PAVING
SAME BELOW
TWO BELOW
HEADS W
SLAB
PAVING
40
3

W. M. F. P.



| THREADS PER INCH | | MUMMY CLOTH |
|---|---|---|
| 62 x | 26 | 1 |
| 56 | 24 | 21 |
| 48 | 19 | 12 C |
| 44 | 31 | 15 ACDE |
| 42 | 19 | 12 F |
| 40 | 26 | 46 E |
| 38 | 24 | 4 |
| 38 | 20 | 33 J-R |
| 36 | 28 | 46 B |
| 36 | 19D | 6 |
| 36 | 16D | 3 |
| 34 | 28 | 23 A |
| 34 | 21 | 46 P |
| 32 | 18 | 2 |
| 31 | 23 | 5 |
| 31 | 17D | 15 B |
| 30 | 23 | 45 |
| 30 | 15D | 12 B |
| 29 | 16D | 24 |
| 28 | 26 | 27 B |
| 28 | 20D | 7 |
| 28D | 16D | 27 |
| 28 | 16D | 14 |
| 28 | 15 | 17 |
| 28 | 15 | 19 |
| 27 | 19 | 11 |
| 26D | 11D | 13 |
| 25 | 19D | 8 |
| 24D | 17D | 32 |
| 24D | 15D | 33 A-H |
| 24D | 14D | 23 B-L |
| 24 | 24 | 27 E-AF |
| 22D | 16D | 43 |
| 22D | 12D | 26 |
| 20D | 14D | 30 AB |
| 20 | 16 | 37 |
| 15D | 11D | 22 |
| 13D | 12D | 9 |
| 12D X | 11D | 10 |

D, DOUBLE THREADS

1:1 1

2

1:2 3

4

5

6

7

8

ΡΗ ΚΟΛΟΦΩΝΙΑ

ΗΚΥΘΡ ΟΛΚΗΣ ϚΡΝ

ΚΟΛ

9

ϷΠΜΑϽ

10

ΝΟΥΠ

11

ΕΥΡΟΥΛΟϹ

OUT

IN

ΒΟΥΛϹ

ΕΥΡΟΥ

12

ΕΚΚΛΗϹΙΑϹ

13

ΜΩϹΙϢ

ΔϹΦΒΣΗΟΥΙϹ

14

ΠΕΤϹ

15

ΤΙΤ

16

ΔΙΟ

ΡΕ

ΟΙΤΟΥ

ΑΓΟΡΑ

ΤΩΝΙΜΑ

ΤΟΠΙΩΛΩΝ

17

Γ

18

ΗΜΗ

Υ

ΤΕΡΠΟ

19

ΟϹΕΥΥ

20

ΜΟ

ΑΥΤΟ

ΥΥΧΕ

21

ΑΡΟ

22

ΟϹΙΜ

ΥΧ

23

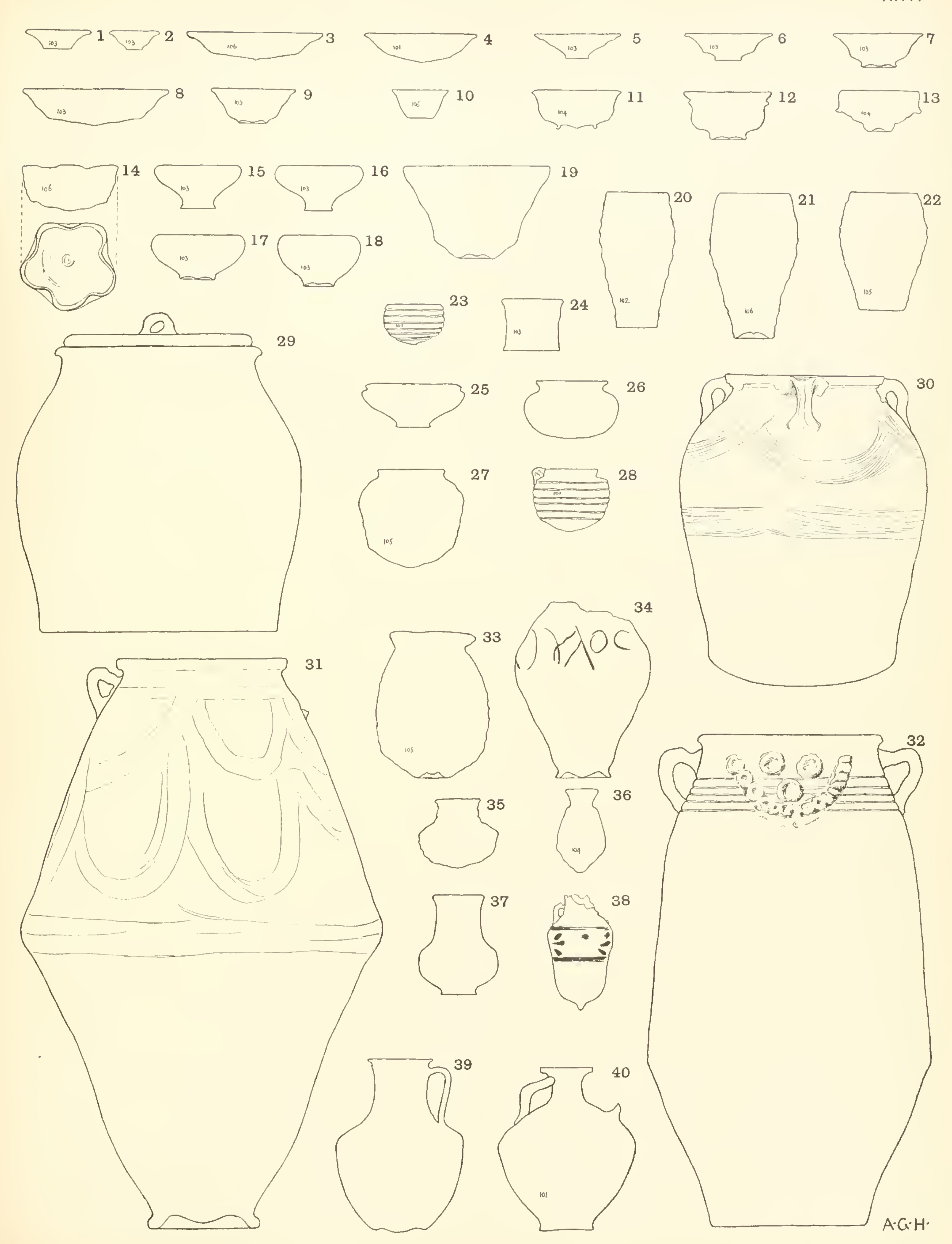
ΤΗϹ

ΡΑΠΕ

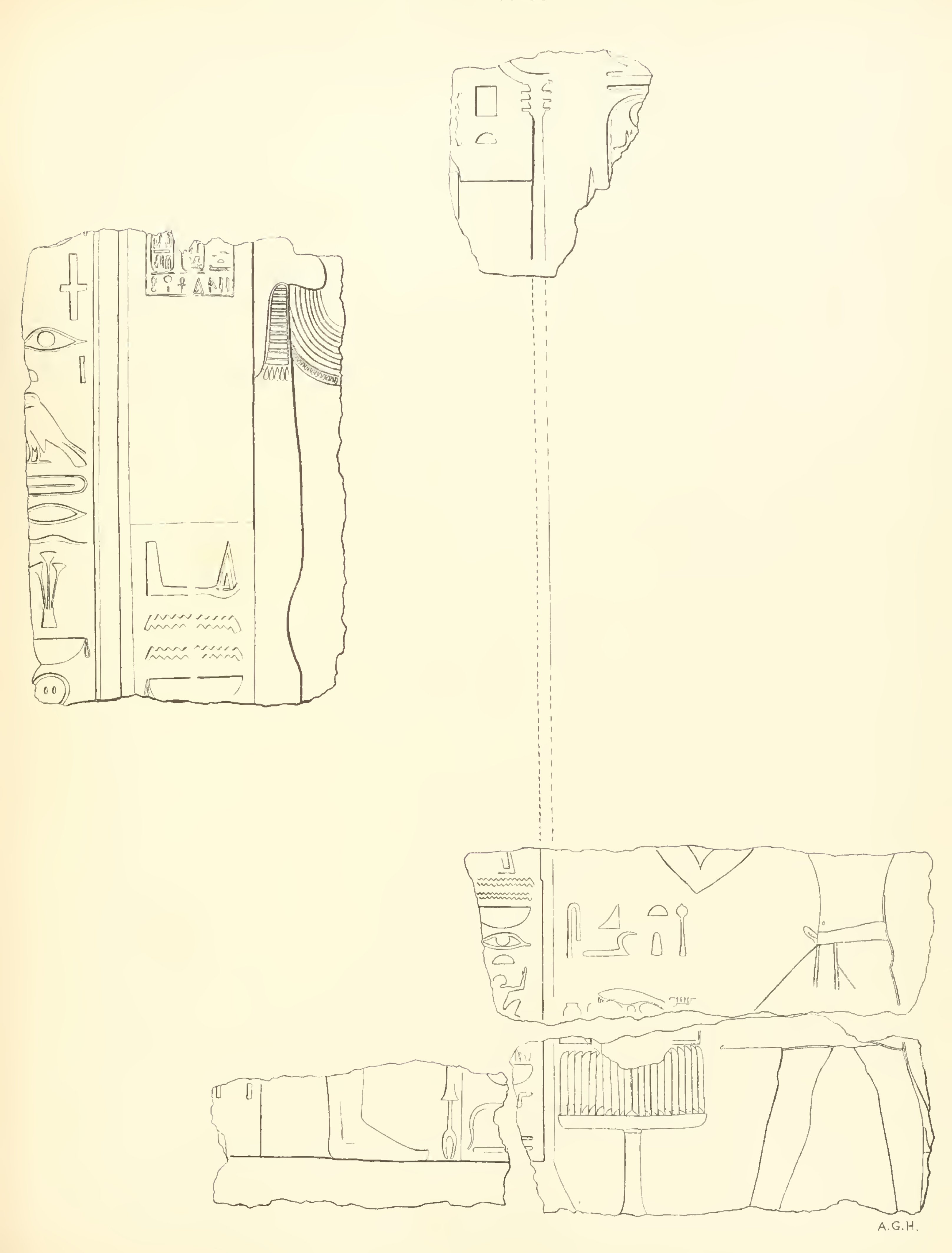
ϒ

ΧΕΙ

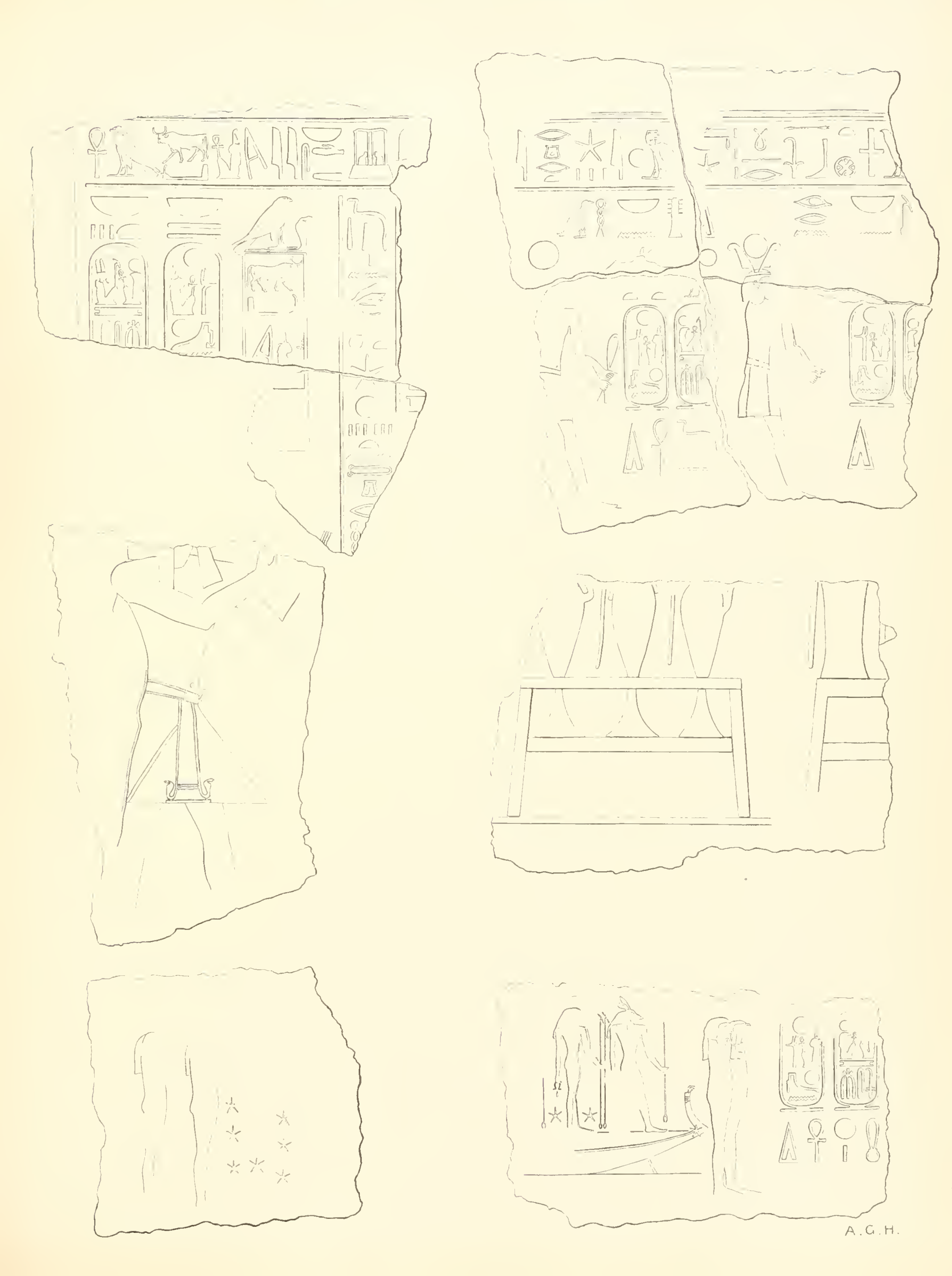
W.M F.P.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
A·G·H·

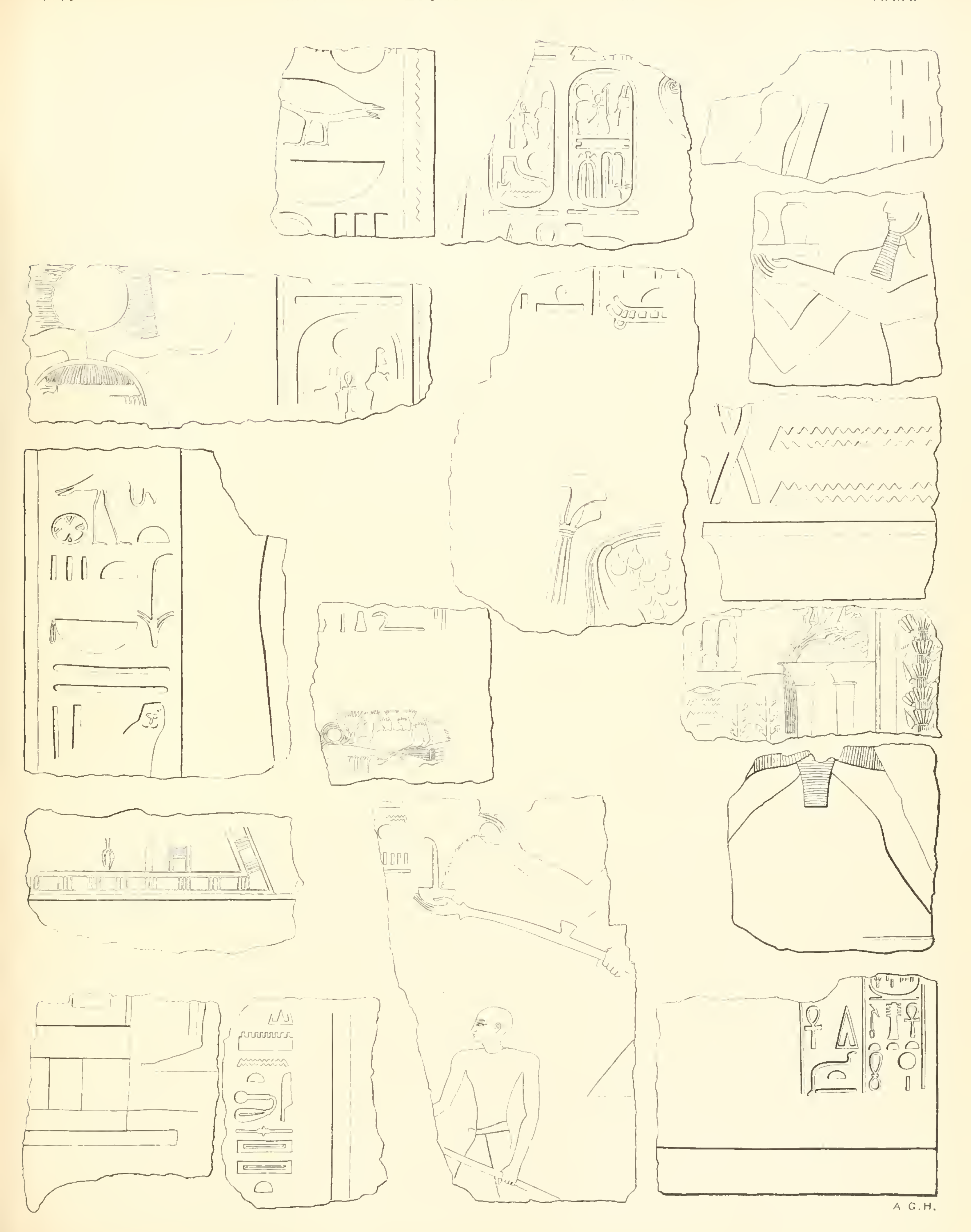
| NUMBER | PLATE | SEX | DIRECTION | QUALITY | BANDAGING | FOOTCASE | BUTTONS IN RHOMBS | ROWS OF BUTTONS | CONDITION | MUSEUM | C. HEAD AT CAMBRIDGE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VII | M | W | G | Red cover + figures | O | O | O | Fair. Portrait edges eaten. | Carlsberg. | |
| 2 | P | M | S | G | Rhombic | O | O | O | Good. Black and white bands. | New York. | |
| 3 | P | M | S | G | " 5 layers | Gilt | X | I | Excellent. | Edinburgh. | |
| 4 | VI,A | F | E | M | " 5 " | O | O | O | Oil stained. . . . . . . . . | Chicago. | |
| 5 | VA | F | N | G | " — | O | — | O | Good. Varnished. | Dublin. | |
| 6 | III | F | S | G | " 5 " | O | X | O | Slightly oiled. Perfect. . . | Munich. | |
| 7 | — | F | S | M | " 7 " | — | — | — | Face peeled off. | — | |
| 8 | P | M | N | G | " 7 " | O | O | — | Good. Split. . . . . . . . | (Reserved) | C. |
| 9 | VA | M | S | G | " 7 " | O | O | O | Partly peeled all over. | Nottingham. | C. |
| 10 | XI | F | S | G | " 13 " | O | O | O | Much destroyed . . . . . . . | Liverpool. | |
| 11 | VII | M | S | M | " 5 " | Gilt | O | O | Much oiled. | E.R.S.A. | C. |
| 12 | P | M | W | G | " 10 " | O | O | O | Good. Canvas. . . . . . . | Carlsberg. | |
| 13 | II | F | W | G | " | O | O | O | Partly rubbed. Canvas. Hermione | Girton. | |
| 14 | — | M | N | — | " | O | O | O | Rotted. | — | |
| 15 | — | F | W | — | " | Gilt | O | O | " | — | |
| 16 | — | M | N | — | | O | — | — | " | — | |
| 17 | — | M | W | M | | O | — | — | " | — | C. |
| 18 | VIIA | F | W | P | " 6 " | Gilt | X | I | Good. Top oiled. Gilt border. | Brussels. | |
| 19 | VIIA | M | W | P | " | " | — | — | Perfect. | Boston. | |
| 20 | — | | — | — | | — | — | — | Bad, split. | — | |
| 21 | VIA | F | E | M | " 8 " | Gilt | O | O | Good, but oiled . . . . | Hibbard, Chicago. | |
| 22 | — | M | W | — | " 7 " | " | X | — | Eaten by ants. Braided border. | — | |
| 23 | V | F | E | P | " 7 " | " | X | — | Poor. Thick panel, as 22. | Nat. Gall. London | |
| 24 | — | M | W | — | | " | — | — | Traces only. | — | |
| 25 | VI | M | W | P | " 4 " | " | X | X | Good . . . . . . . . . . . . . . | Cairo. | |
| 26 | — | F | — | — | " 5 " | O | O | O | Traces. | — | C. |
| 27 | P, VII | M | W | G | " 7 " | Gilt | X | O | Outer peeled. Inner perfect. | Manchester. | C. |
| 28 | VIIA | M | W | P | Cross bands (5) | O | X | I | Perfect. | Manchester. | C. |
| 29 | VIA | F | — | M | Rhombic | O | X | O | Ant eaten top & base. . . . | Munich. | |
| 30 | VIA | F | N | P | Square 5 layers | Red | X | I | Good. Gilt lips. | Boston. | |
| 31 | P | F | — | G | Rhombic | — | — | — | Part lost. Distemper on canvas | Oxford. | C. |
| 32 | — | M | — | M | | — | — | — | Entirely peeled, split. | — | |
| 33 | — | F | S | — | Square 7 | O | X | 2 | Much split. | — | |
| 34 | V | M | S | M | Rhombic 5 | O | O | O | Split, part lost . . . . . . . . . | Brighton. | C. |
| 35 | — | F | S | M | " 5 | O | O | O | Split, ant eaten. | — | C. |
| 36 | I | M | W | G | " 5 | lost | X | O | Perfect, slightly oiled. . . . . | Nat. Gall. London | C. |
| 37 | P | M | — | G | " 7 | O | O | O | Split, but good. Below 27. | Manchester. | |
| 38 | P | M | N | G | " 5 | Gilt | X | 2 | Ant eaten base. Good state . . . | (Reserved) | C. |
| 39 | — | M | W | P | | — | — | — | All split, much gone, gilt lips. | — | |
| 40 | VI | M | N | P | " | — | — | — | Good, little flaked. . . . . . . | E.R.S.A. | |
| 41 | — | F | N | — | Plain . . . . . . . | O | O | O | Only mouth left. Thick panel. | — | |
| 42 | VI | F | N | P | Coarse bandages | Gilt | O | O | Thin paint, rotted by face cloth. | Philadelphia. | C. |
| 43 | VI | M | W | P | Rhombic 5 | " | O | O | Thin paint, damaged. . . . . | (Reserved) | C. |
| 44 | — | F | S | M | " 7 | O | O | O | Much colour lost. Split. | — | |
| 45 | P | M | N | G | " 5 | — | O | 3 | Fair, colour flaky. Gilt border. . | Brussels. | |
| 46 | VA | F | S | G | " 5 | lost | O | O | Top oiled dark. Cross grain. | Oxford. | |
| 47 | — | F | — | P | | — | — | — | Traces, very bad. Thick panel... | — | |
| 48 | — | F | — | P | " | O | — | — | Very rotten. Top only left. | — | C. |
| 49 | — | M | W | G | " 6 | O | X | O | Badly oiled. | — | |
| 50 | P | F | E | G | " 5 | Gilt | X | O | Good, slightly oiled . . . . . . | Edinburgh. | |
| 51 | P | F | — | G | Red cloth + figures | O | O | O | Perfect. Demetris. | Brooklyn. | |
| 52 | VIIA | M | E | P | Rhombic | O | O | O | Badly oiled. | — | C. |
| 53 | V | F | N | M | " 5 | O | X | O | Cuts on face . . . . . . . . . . . | Manchester. | C. |
| 54 | P | F | S | M | " 10 | O | O | O | Split and crushed in. | " | C. |
| 55 | — | F | N | G | " | O | X | 3 | Badly oiled darkened . . . | — | C. |
| 56 | P | M | W | G | " 4 | O | O | O | Perfect. Priest. | Nat. Gall. London. | C. |
| 57 | IV | M | S | G | " 6 | O | X | I | Perfect. | Carlsberg. | C. |
| 58 | P | F | N | G | " 5 | O | O | I | Surface darkened. . . . . . | Nat. Gall. London | C. |
| 59 | V | F | S | G | Resined cloth | O | O | O | Colour much lost by oil. | Cambridge. | |
| 60 | VII | M | N | P | " " | O | O | — | Good . . . . . . . . . . . . . . | E.R.S.A. | C. |
| 61 | — | F | E | G | hombic | O | O | O | Eaten by ants, much lost. | — | C. |
| 62 | — | F | S | — | " 4 | O | O | O | Canvas; only lower part. | — | |
| 63 | — | F | S | — | " 5 | O | O | O | " badly oiled. | — | |
| 64 | — | F | S | M | " 5 | O | O | O | Much rotted, colour mainly lost. | — | |
| 65 | — | — | W | — | " irregular. | O | O | O | Canvas, painted on mummy cloth. | — | |



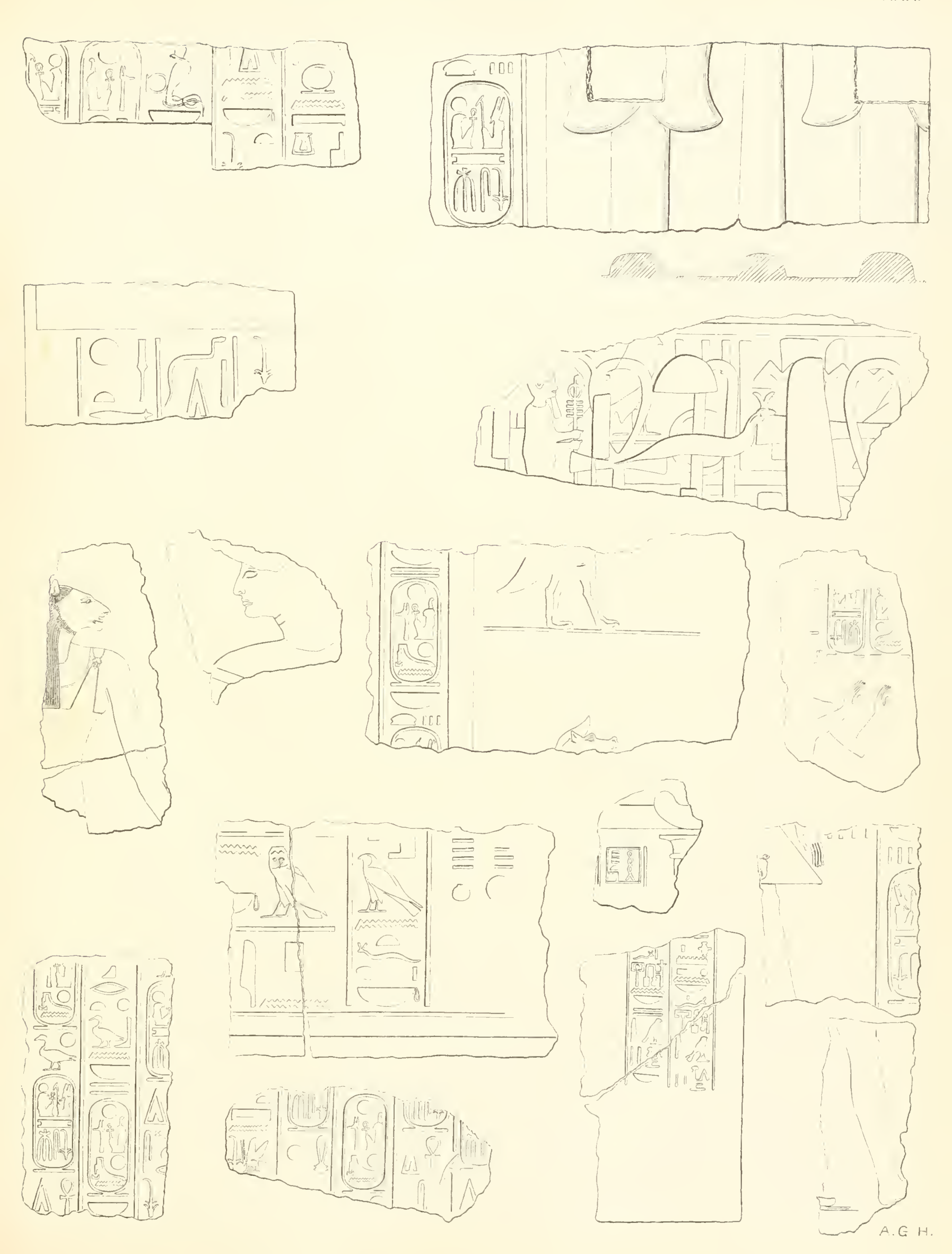
A.G.H.



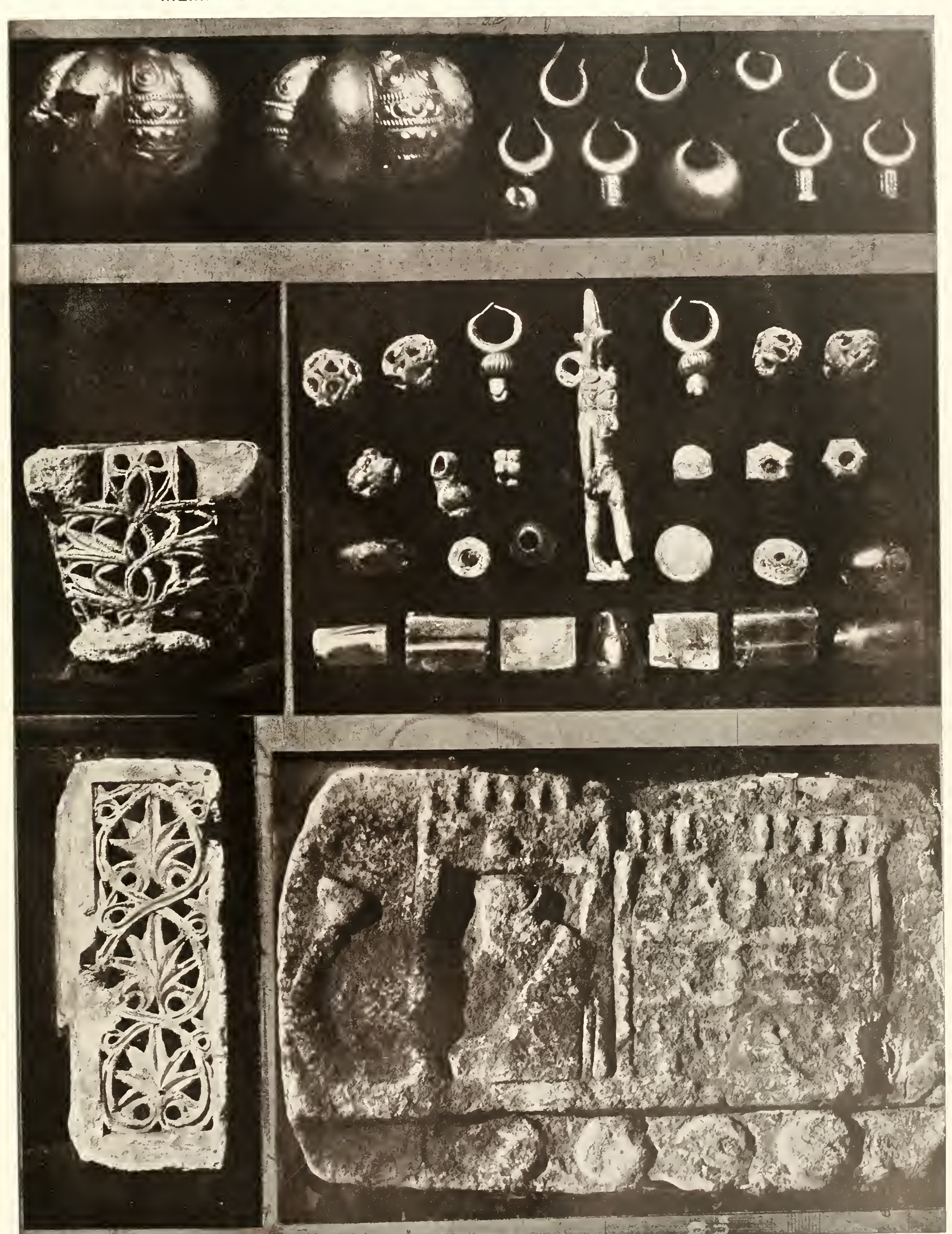
A.G.H.

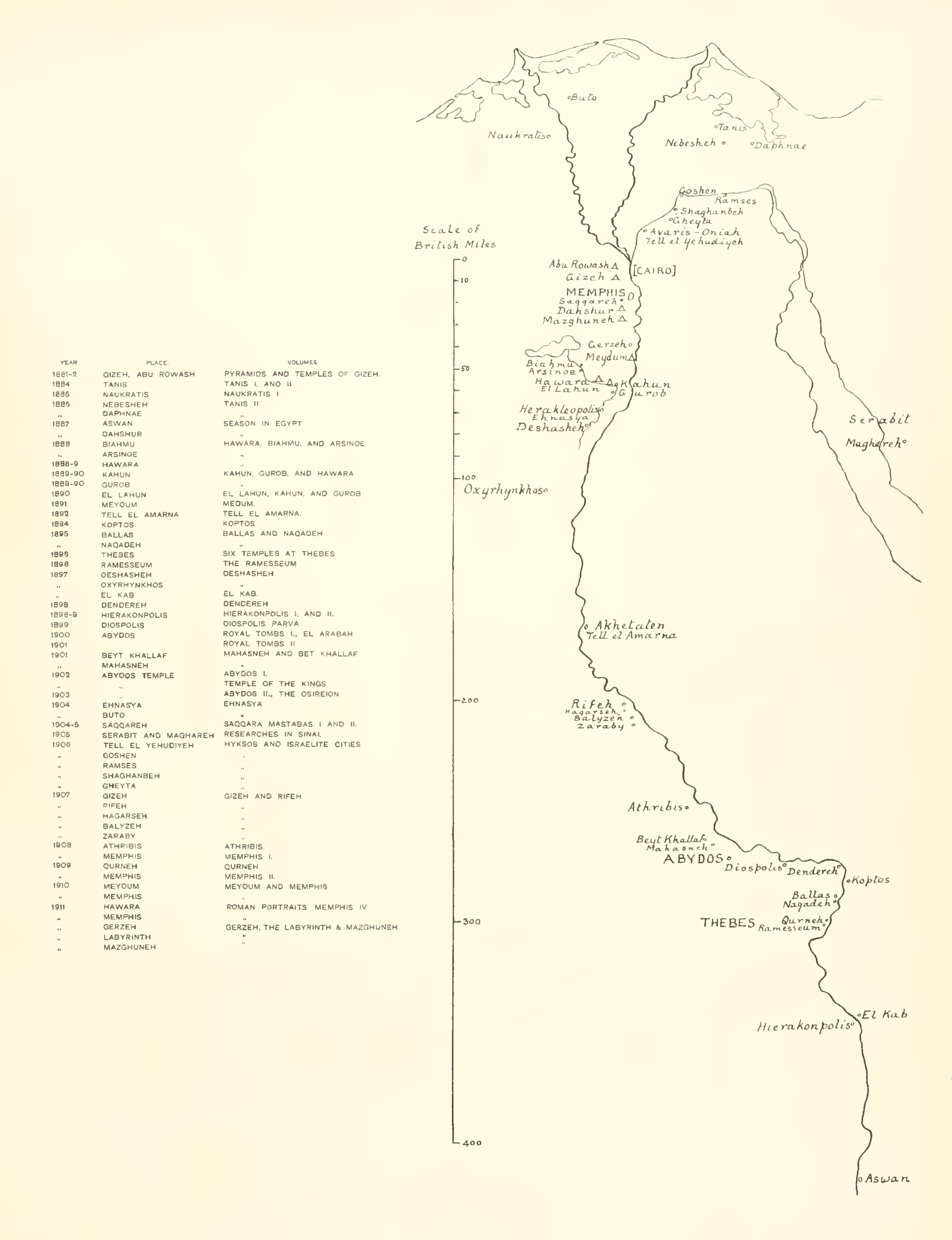


A. G. H.



A. G. H.





| YEAR | PLACE. | VOLUMES |
|---|---|---|
| 1881-2 | GIZEH, ABU ROWASH | PYRAMIDS AND TEMPLES OF GIZEH. |
| 1884 | TANIS | TANIS I. AND II. |
| 1885 | NAUKRATIS | NAUKRATIS I |
| 1886 | NEBESHEH | TANIS II |
| ,, | DAPHNAE | ,, |
| 1887 | ASWAN | SEASON IN EGYPT |
| ,, | DAHSHUR | ,, |
| 1888 | BIAHMU | HAWARA, BIAHMU, AND ARSINOE |
| ,, | ARSINOE | ,, |
| 1888-9 | HAWARA | ,, |
| 1889-90 | KAHUN | KAHUN, GUROB, AND HAWARA |
| 1889-90 | GUROB | ,, |
| 1890 | EL LAHUN | EL LAHUN, KAHUN, AND GUROB |
| 1891 | MEYOUM | MEDUM. |
| 1892 | TELL EL AMARNA | TELL EL AMARNA. |
| 1894 | KOPTOS | KOPTOS |
| 1895 | BALLAS | BALLAS AND NAQADEH |
| ,, | NAQADEH | ,, |
| 1896 | THEBES | SIX TEMPLES AT THEBES |
| 1898 | RAMESSEUM | THE RAMESSEUM |
| 1897 | DESHASHEH | DESHASHEH |
| ,, | OXYRHYNKHOS | ,, |
| ,, | EL KAB | EL KAB. |
| 1898 | DENDEREH | DENDEREH |
| 1898-9 | HIERAKONPOLIS | HIERAKONPOLIS I. AND II. |
| 1899 | DIOSPOLIS | DIOSPOLIS PARVA |
| 1900 | ABYDOS | ROYAL TOMBS I., EL ARABAH |
| 1901 | | ROYAL TOMBS II |
| 1901 | BEYT KHALLAF | MAHASNEH AND BET KHALLAF |
| ,, | MAHASNEH | ,, |
| 1902 | ABYDOS TEMPLE | ABYDOS I. |
| ,, | ,, | TEMPLE OF THE KINGS |
| 1903 | ,, | ABYDOS II., THE OSIREION |
| 1904 | EHNASYA | EHNASYA |
| ,, | BUTO | ,, |
| 1904-5 | SAQQAREH | SAQQARA MASTABAS I AND II. |
| 1905 | SERABIT AND MAGHAREH | RESEARCHES IN SINAI. |
| 1906 | TELL EL YEHUDIYEH | HYKSOS AND ISRAELITE CITIES |
| ,, | GOSHEN | ,, |
| ,, | RAMSES | ,, |
| ,, | SHAGHANBEH | ,, |
| ,, | GHEYTA | ,, |
| 1907 | GIZEH | GIZEH AND RIFEH |
| ,, | RIFEH | ,, |
| ,, | HAGARSEH | ,, |
| ,, | BALYZEH | ,, |
| ,, | ZARABY | ,, |
| 1908 | ATHRIBIS | ATHRIBIS. |
| ,, | MEMPHIS | MEMPHIS I. |
| 1909 | QURNEH | QURNEH |
| ,, | MEMPHIS | MEMPHIS II. |
| 1910 | MEYOUM | MEYOUM AND MEMPHIS |
| ,, | MEMPHIS | ,, |
| 1911 | HAWARA | ROMAN PORTRAITS MEMPHIS IV |
| ,, | MEMPHIS | ,, |
| ,, | GERZEH | GERZEH, THE LABYRINTH & MAZGHUNEH |
| ,, | LABYRINTH | ,, |
| ,, | MAZGHUNEH | ,, |


6

